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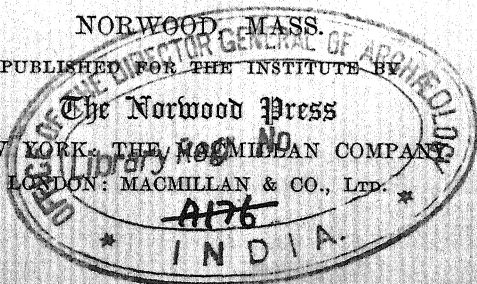
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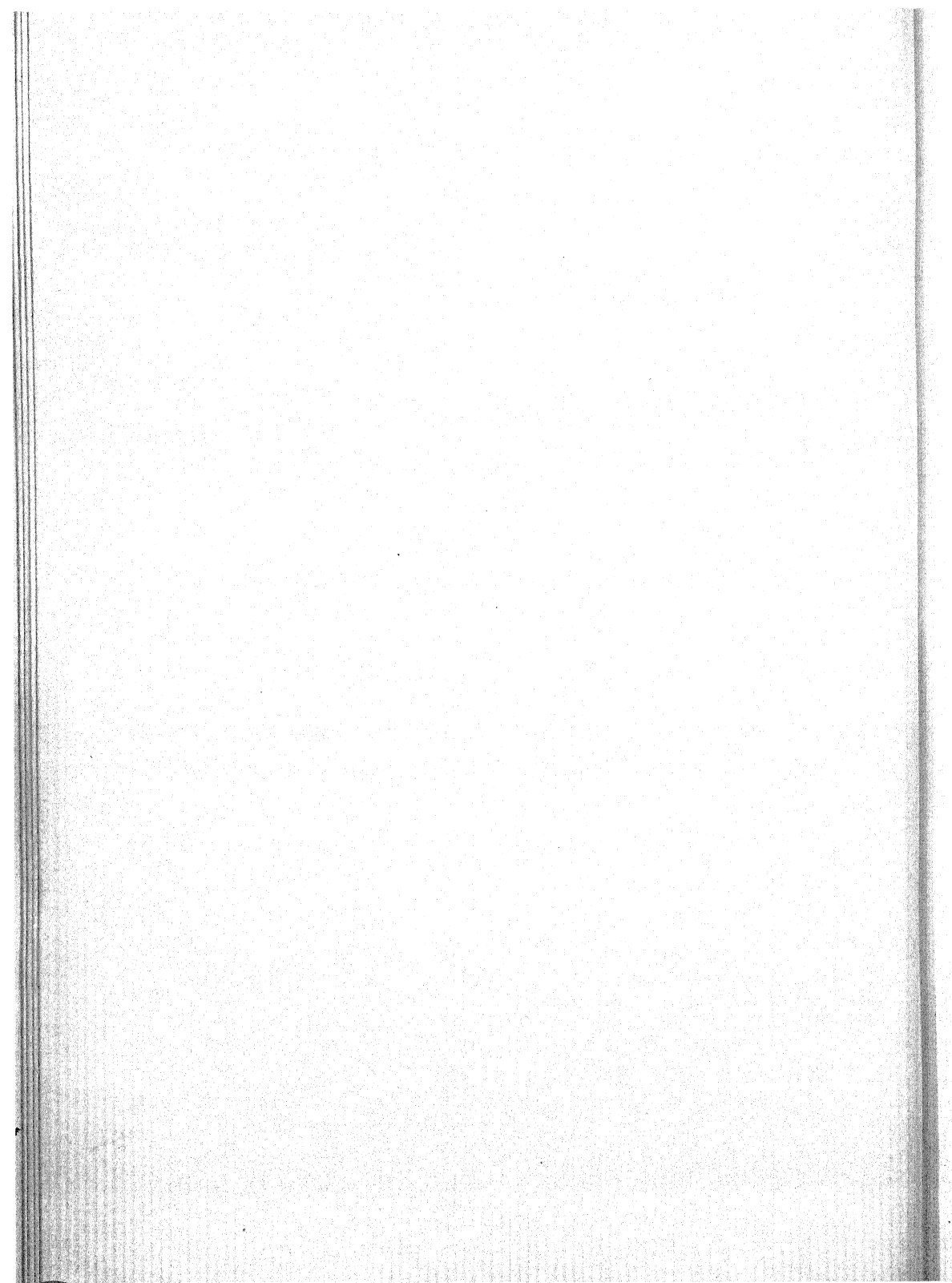
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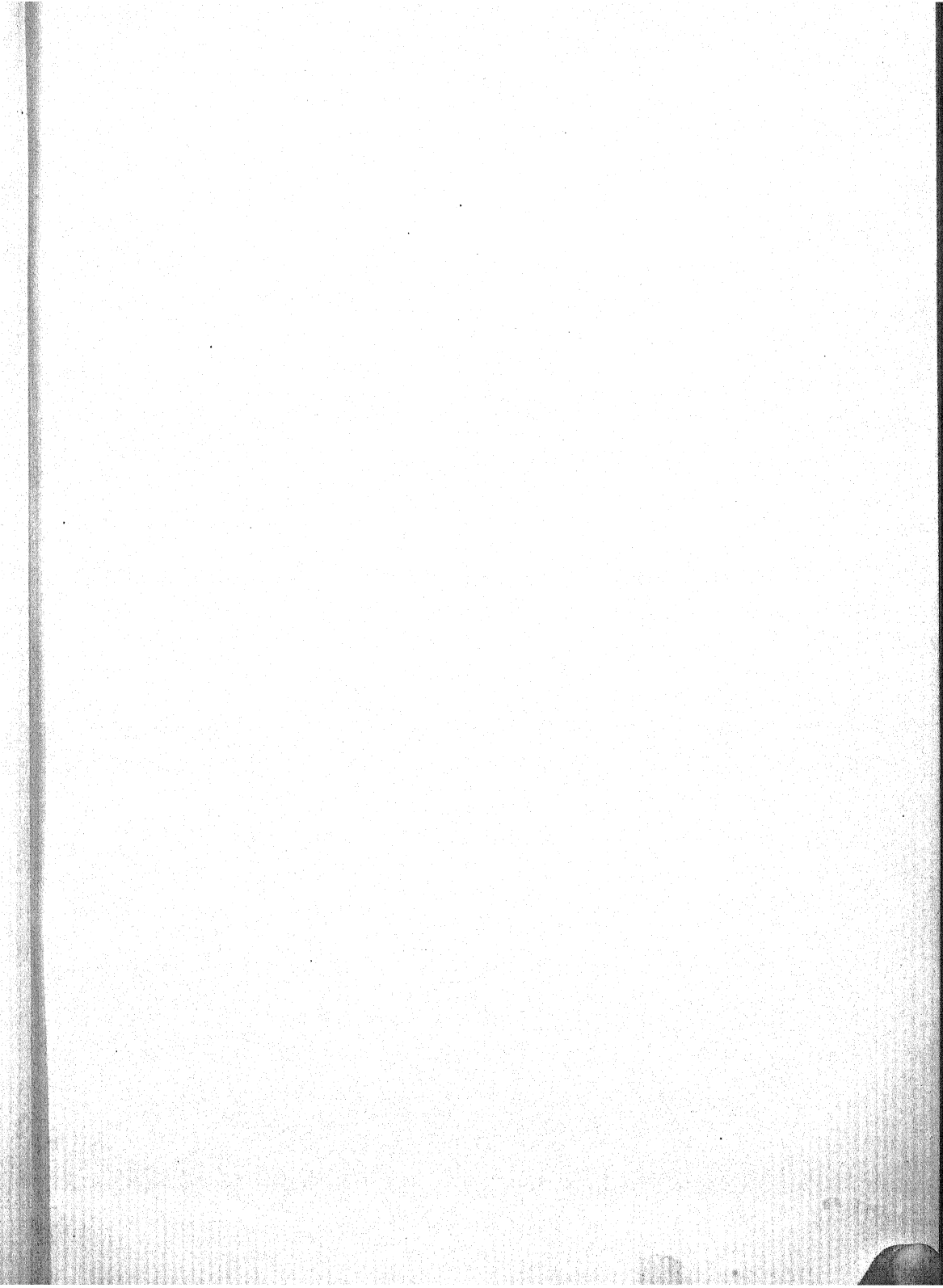
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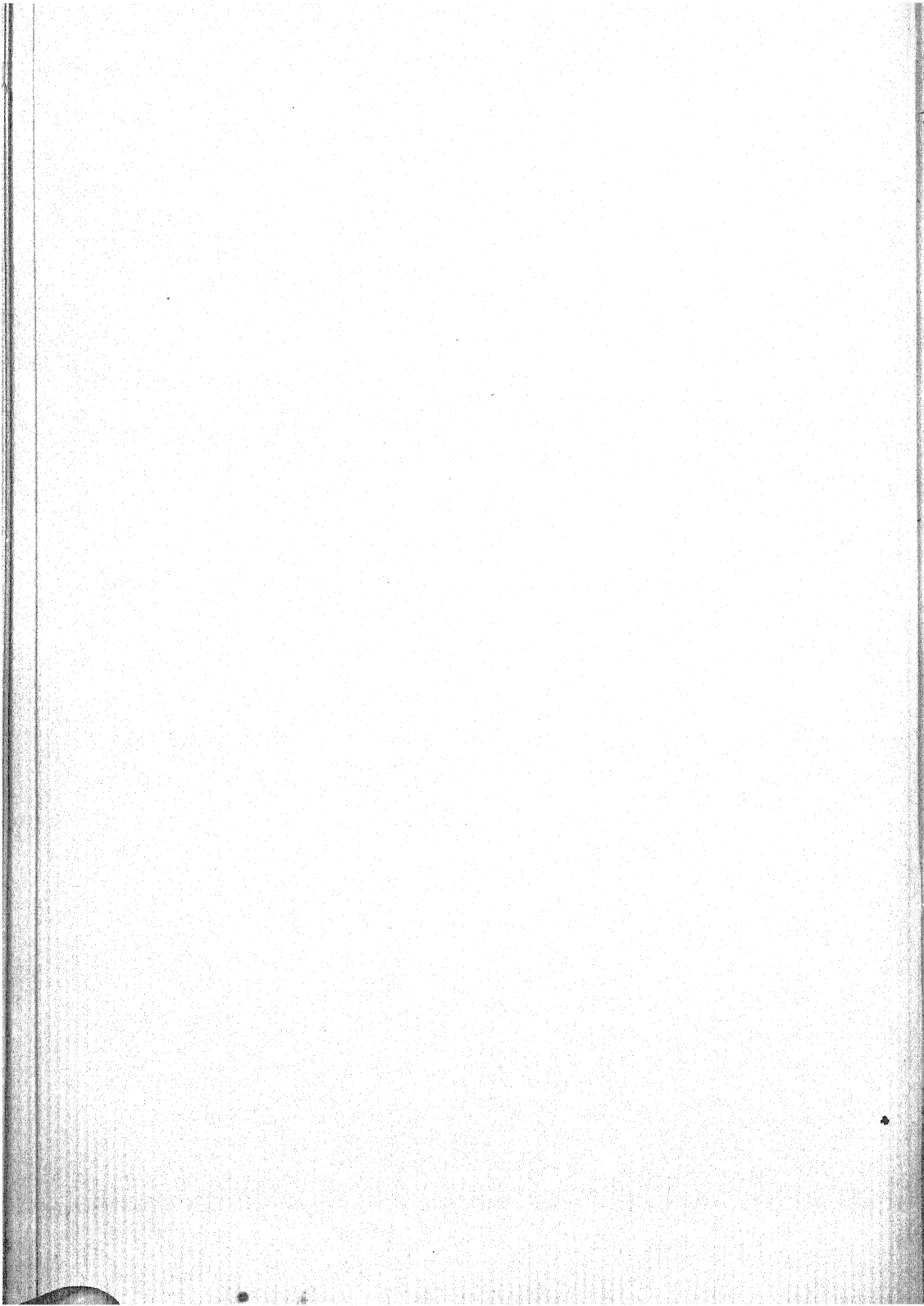
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GENERAL MEETING OF THE ARCHAEOLOGICAL
INSTITUTE OF AMERICA

DECEMBER 27-29, 1900

THE Archaeological Institute of America held a general meeting for the reading and discussion of papers at the University of Pennsylvania, in Philadelphia, Pa., December 27, 28, 29, 1900, taking part in a joint congress with The American Oriental Society, The American Philological Society, The Spelling Reform Association, The Society of Biblical Literature and Exegesis, The Modern Language Association of America, and The American Dialect Society. The separate meetings of the Institute were presided over by the President of the Institute, Professor John Williams White, except Friday morning, when Professor T. D. Seymour presided. At the joint session of all the societies, the presiding officer was President Daniel C. Gilman of Johns Hopkins University. At the joint session of the Institute and the American Philological Association, President White of the Institute and Professor Samuel Ball Platner, President of the American Philological Association, presided.

A resolution was passed thanking the authorities of the University of Pennsylvania for the hospitable reception given to the Institute.

In the evening of Thursday, December 27, Professor B. L. Gildersleeve, of Johns Hopkins University, delivered before the Affiliated Societies an address entitled "Oscillations and Nutations of Philological Studies."¹

¹ *The Johns Hopkins University Circulars*, No. 150, March, 1901.

There were five sessions at which papers, many of which were illustrated by means of the stereopticon, were presented. Brief abstracts of the papers, prepared for the most part by the authors, follow.

THURSDAY, DECEMBER 27. 9.30 A.M.

Address of welcome by Mrs. Sarah Y. Stevenson, President of the Pennsylvania Society of the Institute.

1. Professor George A. Barton, of Bryn Mawr College, *Inscription B of the Blau Monuments* (*Am. J. Arch.* First Series, IV, pl. v, 2).

When Dr. William Hayes Ward was in Babylonia as the director of the Wolfe expedition, he saw two most interesting little objects in the possession of Dr. Blau, formerly of the Turkish medical service. Dr. Ward took wax impressions of these objects, and published them in wood cuts in the *Proceedings of the American Oriental Society* for October, 1885, p. lvii, and again by a photographic process by which greater accuracy was secured, in the *Am. J. Arch.* First Series, IV (1888), pls. iv, v. As these monuments are inscribed in a form of the Babylonian character more archaic than that of any inscriptions previously published, they attracted immediate attention. Later in the same year Menant republished them in the *R. Arch.*, and sought to prove them fraudulent. His argument was based on the formation of the human figures represented on the objects as well as the form of the written characters which they contained.

The progress made in recent years in the interpretation of old Babylonian inscriptions, by the study of the inscriptions from Telloh and Nippur, have placed the genuineness of these objects beyond question. They were republished in 1896 by M. François Thureau Danguin in the *Revue Sémitique*. He translated the inscription on monument A with considerable success. He speaks of the inscription on B as "beaucoup plus obscure," and attempts no translation of it, contenting himself with some remarks upon the identity of some of the signs. Following in Thureau Danguin's footsteps, and having the aid of his *Recherches sur l'origine de l'écriture cunéiforme*, published in 1898 and 1899, I am able to offer a translation of the inscription which I believe to be substantially correct. It reads:

GANA NINNU LU SAL BA NIN-GIR-SU
 GI-MEN
 GA-GA-?
 ALAN-NI SU
 GIR GIN
 // ES KU.

That is: "A stated sacrifice of 50 sheep, a gift to Ningirsu, I Khakha . . . appointed; his monument of preservation, a lance, I brought, in the beautifully built temple I placed."

Although these objects were found near Warka, the ancient Erech, the fact that this one was dedicated to Ningirsu, the chief god of Shirpurla, shows that they were originally connected with that city. The archaic character of the writing is evidence that they record the earliest act of worship there which is as yet known to history. If Ur-kagina lived about 4500 B.C., 5000 B.C. is the lowest date at which we can put this inscription.

2. Dr. W. N. Bates, of the University of Pennsylvania, *The Old Temple of Athena on the Acropolis.*

Professor Dörpfeld, followed by many others, believes that the old temple of Athena on the Acropolis at Athens was rebuilt after its destruction by the Persians in 480 B.C., was used as the state treasury during the greater part of the fifth century, and remained standing perhaps down into the middle ages. There are, however, several pieces of literary evidence which seem to disprove this theory. Lycurgus, Diodorus, and Pausanias all have accounts of an oath which the Greeks swore before the battle of Plataea not to rebuild the temples destroyed by the Persians. In Plutarch's *Life of Pericles*, there is an account of how Pericles called a meeting of all the Greeks to deliberate about the burnt temples. This was about 450 B.C. The purpose of this meeting was to revoke the oath. The evidence of the extant remains of temples shows that no temple destroyed by the Persians was rebuilt before this date. The temple at Eleusis is the most striking example. This temple, which was one of the most important in Greece, was allowed to lie in ruins for a full generation after its destruction; that is, until the time of Pericles. The passages referred to, together with the archaeological evidence, prove that the old temple of Athena on the Acropolis was never rebuilt, but that a generation after the Persian Wars, when the oath had been revoked, a new temple, the Parthenon, was built to take its place.

3. Rev. Dr. William C. Winslow, of Boston, *Recent Discoveries in Crete*. The paper dealt with the discoveries made by Mr. A. J. Evans at Cnossus (see *Am. J. Arch.* 1900, p. 491), with special attention to the evidences of Egyptian influence in Crete.

Daedalus, according to Diodorus, built the propylaeum of Hephaestus at Memphis. The palace at Cnossus has striking points of resemblance to Egyptian buildings. The dark and white chequer squares in architectural elevations upon the wall paintings vividly recall those over a doorway of the sixth dynasty (Maspero, *Manual of Egyptian Archaeology*, p. 21), and there is a structural parallelism in the insertion of the rectangular cushion between the capital and the beam. The backing of the fine painted plaster, simply clay and rubble, suggests the baked Nile mud behind the finished frescoes at Tell-el-Amarna, etc. Cretan and Egyptian paint are equally durable. Two charming motives blend in a tall stone lamp: Mycenaean foliation upon a pedestal of lotus form.

Mr. Evans notes that the indebtedness to Egyptian instruction in technical processes is very marked. The vitreous paste of pale green and brilliant blue, the green, black, and purple glazes, all recall Egypt. Rondels upon the floor have the style and tone of those at Tell-el-Gahadiyeh. The Cretan artist made the same preliminary use of vertical and horizontal lines divided into small squares for the guidance of his brush as did the Egyptians. The motives in the landscapes of flowering reeds and running water, and fish beneath the plants, are Nilotic in the extreme. Nevertheless, the Cretan artists were by no means slavish imitators.

Perhaps of all the points of contact nothing is so Egyptian as the succession of life-size human figures upon the corridors at the southwest entrance of the palace. "Here," says Mr. Evans, "we see large processional scenes of strikingly Egyptian character" (*Arch. Report Eg. Ex. Fund*, 1899-1900, p. 63). The conventional flesh colors—ruddy brown for the men, white for the women—are the same, as is the general attitude of the youths, as seen, *e.g.*, on the walls of the tomb of Rekhmara, Governor of Thebes under Thothmes III.

There is a marked analogy between the pictographic Cretan script found at Cnossus and Egyptian hieroglyphics, though Cretan scripts do not, as a rule, closely resemble Egyptian writing. An Egyptian diorite statue found in the eastern court of the palace at Cnossus is regarded by Mr. Evans as evidence for the date of the

palace, and for the intercourse of Crete with Egypt from 2500 to 2000 B.C. Possibly, however, the statue may have been imported much later than the date of its execution.

4. Mr. Howard Crosby Butler, of Princeton University,
Sculpture in Northern Central Syria.

Since the publication, nearly forty years ago, of the important work of Count Melchior de Vogüé, almost no archaeological research has been carried on in central Syria, except by a few German epigraphists. Neither M. de Vogüé nor his followers have mentioned any important remains of sculpture excepting in connection with architectural details.

During the year 1899-1900, an American expedition, conducted by the speaker, was at work in the country explored by M. de Vogüé, and in the neighboring regions which have never before been visited by archaeologists, and found, in addition to a great number of inscriptions and monuments of architecture, considerable remains of sculpture of uncommon interest. The sculpture is all in the form of reliefs, and usually appears in connection with funeral monuments, although specimens were found adorning other buildings, as the pediment of a Roman temple or the lintel of a private dwelling, while some reliefs were standing in the open country and not connected with tombs or other buildings. The most important reliefs were found in the rock-cut tombs of two ruined and deserted cities, Dêhes and Frikya. In the former the receptacles for the bodies were carved to represent Roman couches. Above these were portrait busts. Other decorations consisted of small reliefs representing various mythological scenes and personages. In one of the tombs in the latter place is an elaborate group representing a funeral banquet; two figures, of life size, reclining on a couch before a table, and attended by servants and members of the family. Above this group is a frieze of small figures in procession toward an altar. Opposite it is a line of portrait busts. In this tomb there are inscriptions furnishing names and the date. The other tomb in this place is adorned with statues of Graeco-Roman deities, and one of some high dignitary, in niches, all cut in the living rock. All of these reliefs are executed in excellent late classic style. A much mutilated relief, standing in the open country, represents a figure, slightly less than life size, mounted upon some kind of an animal. Another free standing relief represents a man in armor, with a lion on one side and a huge serpent on the other.

Some of the sarcophagi are ornamented with reliefs, usually busts,

although one was found with the conventional genii and garlands carved upon its side. The faces of the reliefs have been mutilated, in every case presumably by the Mohammedan natives of present and mediaeval times.

5. Mr. Edward L. Tilton, of New York, *The Publication of the Results of the American Excavations at the Argive Heraeum.*

The Argive Heraeum occupies a low foot-hill of Mt. Euboea a few miles north of the Gulf of Argos. A massive Cyclopean wall retains the upper terrace upon which was built the old temple, whose remains indicate it to have antedated the Heraeum at Olympia. The old temple was destroyed by fire in 423 B.C., and a new temple built upon a lower terrace constructed for the purpose by levelling the ground and building a retaining wall on the southern side, against which a beautiful Stoa was constructed about coeval with the new temple. Many interesting proportions developed in connection with these fifth century buildings. A unit of measurement of 0.326 m. prevails throughout both, and coincides with the unit discovered by Dr. Dörpfeld at Olympia. Another noteworthy structure was the so called "West Building," possibly a hospital, dating from the sixth century B.C. Two of the rooms contained stone couches similar to those found at Aegina in a rock-cut grave (*Expédition de Morée*, III, 40). A third room was closed by a stone door resembling the marble door of a grave at Palatitza (see HEUZÉY, *Mission Archéologique de Macédoine*, pl. 21). The occupation of the sacred site under Roman rule is marked by a late building, with floor construction similar to that in the baths at Pompeii.

6. Professor Karl P. Harrington, of the University of Maine, *Some Artistic Types familiar to a Roman Country Gentleman.*

Perhaps nobody in the Augustan age comes nearer to the ideal of a Roman country gentleman than the poet Albius Tibullus. Unlike Propertius, Tibullus does not mention either works of art or artists by name. But he possessed a pictorial imagination, and evidently reproduced in many cases what he had seen in concrete form in marble or in painting. Especially in his references to the gods, and other personages of mythology, it is clear that he had in mind certain definite types with which he had become familiar through works of art. Since he never was in Greece proper, and spent most of his life at or near home, most or all of these types must have been those with which he had become familiar at Rome or in the vicinity. Of these, some may be identified with a reasonable degree

of certainty, others may have a respectable argument made for them, and in a considerable number of instances a reason may be discovered for the conjecture as to the existence of works of art to us otherwise unknown.

(1) Types apparently to be identified are: the Apollo Citharoedus of Scopas, described, practically, at the beginning of the fifth elegy of Book II; the capitoline bust of Dionysus, referred to in connection with the horns in II, 1, 3; the original from which the Mars and Rhea Sylvia episode is copied, on the Ara Casali; the Scopas relief exhibiting the great-winged Death on the drum of the column of the temple of Diana at Ephesus; the Nike of Paeonius combined with that of Samothrace, and the Sibyl restored by Messalla, near the Roman rostra.

(2) Probable types are found in the Demeter fresco in Pompeii, the Artemis of Versailles, the Apollo Belvedere, Apelles's painting of Venus Anadyomene in the temple of the Divine Julius, the bow-stringing Eros, the Pompeian fresco of the Parcae, and others.

(3) In several cases the existence in the times of Tibullus of works of art, especially frescoes, may be conjectured, as of Pales, Tantalus, a prototype of the modern Aurora, Thetis riding on a dolphin, the Elysian Fields, Bellona (probably a fresco) in the temple of the goddess, and Vertumnus.

It appears from these instances that we may draw two conclusions: (a) the works of sculpture best known to Tibullus were those of the Praxitelean epoch, as is natural, when we consider the society in which he moved; (b) there were surely many fine frescoes at Rome of which we have now no knowledge save through such hints as these which Tibullus gives us in his elegies.

7. Rev. Walter Lowrie, of Philadelphia, *An Early Christian Representation of Jonah, in the Metropolitan Museum.*

[This paper is published in full below, pp. 51-57.]

8. Rev. Dr. James B. Nies, of Brooklyn, *Excavations in Palestine and what may be expected from them, and some observations made in 1899, during a series of journeys which covered the greater part of Eastern and Western Palestine.*

In many places tombs are robbed by the fellahin, and such places as Caesarea, Jerash, and Ammam are being rapidly destroyed by the Bosnian and Circassian colonies. While surface exploration has been done with considerable thoroughness by travellers and previous

surveys, especially in Western Palestine, excavations have scarcely been begun. Of the hundreds of mounds or tells covering ancient towns and cities, and of the hundreds of other ruins which exist there, only Jerusalem, Tell el Hesy, and about half a dozen other unimportant sites have as yet been attempted, and that not in a very thorough manner. Such important places as the Philistine cities, Samaria, Beth Shean, Megiddo, and the whole East-Jordan country are virgin soil for the spade of the excavator.

Dr. Nies spoke of the need of combining excavation with the other work of the School for Oriental Archaeology, recently established at Jerusalem, and of the necessity of augmenting the \$4000 a year thus far pledged by an endowment of at least \$200,000 for this purpose, in order to carry on this work in a rapid and scientific manner.

Among objects not, to his knowledge, previously described, he observed a large circle at the eastern end of Mount Carmel, a dolmen near Ras el Abyad on the road to Tyre, a well-preserved stone circle on the slope of Jebel Osha, beside the road leading from Salt to Nablous, six uninscribed Roman mile-stones on the road from Pella to Ajlun, formerly part of the road from Pella to Jerash, also four inscribed Roman mile-stones southeast of Yajuz. He found a late Greek inscription at the Ramet el Khalil near Hebron, and identified four large fragments of bulls recently found by the American missionaries at Sidon, while digging for foundations for a new building, as being Persian bull-capitals similar to those which surmounted the sixty pillars of the throne room of Artaxerxes at Susa. Finally, he discovered a low hill, with ruins and numerous large caves and cisterns, near Mashita, now bearing, among the Arabs, the name Mashita; the name of the latter place being the Khan.

Remarks were made by Rev. Dr. John P. Peters, and Rev. Dr. J. H. Thayer.

THURSDAY, DECEMBER 27. 2.30 P.M.

At the joint session the following papers of archaeological interest were read.

1. Professor J. R. Sitlington Sterrett, *A Ruined Seljuk Khan compared with Anatolian Khans of To-day.*

Sultan Khan (= Royal Khan) lies about thirty miles west of Ak Serai (Archelaïs), in the arid, treeless waste known as the Lycaonian desert.

The Arabic inscriptions on its portals inform us that in 662 A.H. (= 1264 A.D.) Alan-eddin, the eleventh and last of the Seljuk Sultans of Iconium, gave orders for the construction of the Khan.

The ground plan exhibits a building whose total length is 121.62 m. The building consists of two great quadrangles separated by a wall. The front quadrangle is 66.75 m. long and 43.32 m. wide.

On entering we find ourselves in a great open court, along whose southern side is a series of chambers varying in size and lighted only from the doors, which open directly upon the court. On the north side of the court is a series of intercommunicating arcades. In the centre of the court is a Kublak resting on four pillars and supported by groined arches.

A portal in the centre of the western wall of the court gives entrance to an annex 54.87 m. long and 36.85 m. wide. This annex is a spacious stable whose roof is supported by lofty groined arches, above which rises a tower intended to insure proper ventilation, for the stable has no windows and only the one doorway from the court.

The Khan, which faces east, is massively built of well-hewn stones, and on the outside shows a dead, windowless wall more than 2 m. in thickness. But to make it still more secure, it is supported by ten buttresses at suitable intervals.

The building has but one entrance, through a lofty and richly decorated portal in the centre of the eastern façade. The portal of the stable, which opens from the court, is smaller, but richly decorated.

Though it marks the very end of the Seljuk empire, the Sultan Khan is one of the finest specimens of Seljukian architecture.

2. Professor Harold North Fowler, of Western Reserve University, *The Connexion of Phidias with Pericles and his Buildings.*

The belief that Phidias was the general overseer of building operations under Pericles is based upon the statement of Plutarch in his *Life of Pericles*, chapter xiii. This is derived from Ephorus, who in turn derived it apparently from Stesimbrotus of Thasos, a thoroughly untrustworthy writer. It is probably no more true than are the reasons given by Aristophanes for the breaking out of the Peloponnesian War. There is, therefore, no reason for connecting Phidias with the sculptures of the Parthenon, unless the style of the work shows that he was the artist who created it.

FRIDAY, DECEMBER 28. 9.30 A.M.

1. Professor George Hempl, of the University of Michigan, *Interpretation of the Scene and Inscription on the Praenestine Cista at Paris.*

[New interpretations of some of the figures and inscriptions on the early Praenestine cista at Paris (cf. *Mél. Arch. Hist.* vol. X) were offered.]

2. Professor Bernadotte Perrin, of Yale University, *The "Hiereiai" of Hellanicus and the Burning of the Argive Heraeum.*

The testimony of Pamphila (Aulus Gellius, XV, 23) to the relative ages of Hellanicus, Herodotus, and Thucydides, may be, and probably is, factitious in its exact figures; but there is no convincing reason to doubt its general truth. Hellanicus may have been a slightly older contemporary of Herodotus, a much older contemporary of Thucydides, and may have survived even the latter. Thucydides certainly, and Herodotus probably, drew much material from prior works of Hellanicus, though both looked down upon his methods as far inferior to their own. Hellanicus passed through the chorographical and genealogical methods of composing history to the method of the chronicle and annal, but beyond this method, in spite of the brilliant example of Herodotus, he never advanced.

Of the ten great works to be attributed with certainty to Hellanicus, none is wholly exclusive of the others either in method or material, and it is clear that he reworked much of his material as he passed from one predominating method of composition to another. This is not surprising.

It is surprising, however, to find that the two great chronological works of Hellanicus, the *Hiereiai* and the *Atthis*, cover much the same ground, and follow the same method. Both have a mythical and legendary period, where the chronology is reckoned by generations,—a unit of thirty-three years; and both a historical period, where the chronology is reckoned by recorded lists of public officials. In the case of the *Hiereiai*, the official is the priestess of Hera at the Argive Heraeum; in that of the *Atthis* it is the annual archon at Athens. Both covered the recent history of the Peloponnesian War, but with the remarkable difference that the *Hiereiai* gives us no fragment (*i.e.* is cited by no later writer) for any event later than the opening years of the war, while the *Atthis* gives us fragments for

much later events, such as the Sicilian expedition (415 B.C.) and the battle of Arginusae (406). To all appearances the *Hiereiai* was discontinued and superseded by the *Atthis*, and both were Hellenic chronicles.

The catastrophic burning of the Argive Heraeum in November, 423 B.C., which Thucydides narrates with remarkable detail (IV, 133, 2, 3), furnishes a reasonable and natural explanation why Hellanicus should abandon the chronological thread for his Hellenic history which had been supplied by the archive lists of temple priestesses; and the boundless prestige of Athens during the years between her great triumph over Sparta at Sphacteria (425) and the Peace of Nicias (421) made it equally natural for him to select, as a new chronological thread on which to rearrange the old material of the *Hiereiai* and arrange the new material brought by the advancing years, the archive lists of annual archons at Athens. No basis of chronology bade fairer to win national currency than this.

In the chronological passages II, 2, 1, and V, 20, 2, in Thucydides, we may, on this explanation, see veiled reference to both the *Hiereiai* and the *Atthis* of Hellanicus; in the later passage I, 97, 2, to the *Atthis* alone, which was then recognized as the final form of the great national chronicle. For neither has Thucydides a kindly word.

3. Miss Mary H. Buckingham, of Boston, *The Work of the German Reichslimeskommission.*

The frontier of the Roman Empire between the Rhine and the Danube has been the subject of a systematic investigation under the sanction of the German government, since 1892; and the work, now nearing completion, has greatly enlarged our knowledge of the nature, the position, and the history of the boundary and of the structure connected with it. It consists of two parts: the frontier of the province of Raetia, running west from a point on the Danube above Regensburg, and that of upper Germany, which starts from the Rhine about midway between Bonn and Coblenz and meets the other line at a right angle, some twenty-five miles east of Stuttgart. The general course of the line, with the positions of many of the forts and watch-towers which guarded it, was already well known, as was also the main distinction that the Raetian boundary was marked by a stone wall, and the German, by a rampart of earth with a wide ditch in front. Now, however, at least two earlier stages have been discovered for both portions, — one when the actual *limes* or patrol-path connecting the forts and guard-houses was protected on the side of the

enemy by a fence of stout posts with an interlacing of branches, and another when the main barrier was a stockade or palisade of tree-trunks or half-logs set close together in the ground and bound by crosspieces. This palisading was replaced by the stone wall in Raetia, but was retained when the earthwork was constructed for Upper Germany, and always formed the chief barrier for that province. To these early stages also belongs a series of entrenched camps and wooden guard-houses, afterwards superseded by the stone structure to which the visible remains belong.

The first part of the boundary to be laid out was probably that north of the Main, and the date, the time of Domitian's war with the Chatti, in the year 83 A.D. To Hadrian may perhaps be assigned the change to more substantial fortifications and with it the alteration of the route from an irregular line, keeping along the high ground, to a system of straight lines. The pottery, coins, and inscriptions are important guides for dates. Many forts have been discovered, both along the frontier and in the whole region between it and the river. Detailed studies of some of these military posts are the only part of the definitive publication that has yet appeared. The territory in question was retained less than two centuries, the frontier being again withdrawn to the Rhine and the Danube under Gallienus (260-268 A.D.).

4. Professor W. H. Goodyear, of the Brooklyn Institute Museum, *The Leaning Façade of Notre Dame as compared with that at Pisa.*

In the façade of Notre Dame at Paris is a constructed outward lean in the lower story, amounting to about 9 inches and of uniform character throughout the whole front. This is a provisional estimate obtained by plumbing the lower part of the façade, as related to a rough estimate of the height of the first gallery; but it is rather under than over the exact measure. Above the gallery of statues the façade becomes vertical, thus showing that no settlement has occurred since the construction of the building. A uniform settlement after the completion of the first story, against the thrust of the buttresses, and extending to the line of the side walls, would be hardly conceivable.

A similar construction of a leaning lower façade which straightens back to the perpendicular has already been proved to exist in the Cathedral of Pisa. The outward lean at Pisa amounts to 17 inches. San Michele at Pavia and San Ambrogio at Milan have the same peculiarity of a front leaning forward to about one half the height.

and then bending back to the perpendicular. The lean at Pavia is about 12 inches; in San Ambrogio it is about 18 inches.

In all these cases the fact of the bend or return to the perpendicular is more significant than the fact of the lean, considered in itself, because it antagonizes the hypothesis of settlement after completion; and the gradual character of the bend at Pavia is wholly inconsistent with settlement during construction. The front of San Michele has no galleries, and here the bend is a veritable curve, and at Pisa the diminution of lean in the second gallery and final return to the perpendicular gives the result of a curve. In the Cathedral of Ferrara the inclination of the façade is roughly estimated to be about 9 inches (probably more), but here there is no return bend, and therefore a settlement is more easily assumed for such a case. There are, however, no indications of such partings, or repairs of partings, in the side walls at Ferrara as a settlement and forward lean of 9 inches would have involved. Careful search for such evidence of accident was also made in vain at Pavia, but the side masonry is inaccessible in the case of San Ambrogio. The wholly convincing and apparently impregnable evidence of intentional construction is furnished by the Pisa Cathedral.

My first observations on the masonry construction at Pisa were made in 1870 and were published in *Scribner's Magazine* for August, 1874. Very careful and elaborate surveys of the masonry of the Pisa façade were made in 1895 and were published in the *Architectural Record Quarterly* for March, 1898 (vol. VII, No. 3).

The surveys were made on behalf of the Brooklyn Institute and under my direction by a professional architect and surveyor, Mr. John W. McKecknie, who was assisted by another architect, Mr. Nelson Goodyear. These gentlemen have verified and corroborated the original observations of 1870. Since the measurements taken in 1895, no expert has, so far, to my knowledge, disputed the inference that a bending façade was purposely constructed at Pisa. As Paris is nearer than Pisa to the sphere of frequent visits on the part of American experts, the observation on Notre Dame may draw their attention in a larger degree to the remarkably convincing measurements made at Pisa. These measurements relate to the masonry courses of black and white marble along the bays of the side walls and to the angles at which they enter the corner pilasters of the façade. As taken at various points and various elevations these measurements refute the suggestion of settlement at any point or period of construction. Taken collectively, they prove that each stone was cut for the position which it now occupies; and this proof

has been duplicated by photographs taken in such detail as to show the cutting of each individual block of masonry on the side walls of the Pisa Cathedral. (The Brooklyn Institute Survey made, altogether, fifty-five photographs of this Cathedral.)

Much stress is laid on the above measurements because the construction of a leaning or bending façade is so wholly foreign to the mental attitude and artistic ideals of the nineteenth century. Even the possibility of the existence of another ideal at certain centres, and during certain periods, of the Middle Age has hardly dawned as yet on the historians and critics of mediaeval art. It is only, however, when many related phenomena are carefully studied and are found to come under the same general explanation of a thoughtful consideration of aesthetic or artistic effect, that any one of them assumes really important proportions, in a general view of the history of the Mediaeval Art. Hence the leaning or rather bending façade of Notre Dame, if it be considered intentional, must be viewed in relation to a large number of other facts wholly aside from façades and relating to ground-plans, arcades, and dimensions in general. Many such facts have been published in the *Architectural Record Magazine* on behalf of the Brooklyn Institute Survey of Italian Mediaeval Buildings. (See *Am. J. Arch.*, 1897, pp. 440 f., 1898, pp. 339 f., 1900, pp. 170 ff.)

5. Miss Harriet A. Boyd, of Smith College, *Houses* and Tombs of the Geometric Period at Kavusi, Crete.*

During the year 1900, the attention of all students of Greek antiquities has been drawn to Crete by the brilliant discoveries of the English archaeologists at Knossos and Psychro, which reveal Crete at the height of her greatness in the second millennium B.C. At the same time, some light has been thrown on the obscurer period which followed the Golden Age, by excavations at Kavusi, a village about sixty miles east of Knossos.

In Crete as well as in Cyprus, it seems true that whereas the Mycenaean princes preferred the lowlands, their successors withdrew to the mountains. The sites investigated at Kavusi are steep, almost inaccessible, heights.

Earliest in date are a house and a small necropolis of "bee-hive" tombs on "Thunder Hill," where iron swords with hilts of a late Mycenaean type, bronze fibulae, and vases of Mycenaean shape with geometric ornamentation, were found.

Of somewhat later date is a little castle perched on the "Citadel," more than 2000 feet above sea-level. Stone corn-rubbers and bowls

for pounding corn, stone and clay weights for looms, milk-bowls, trumpet-shaped funnels, a stone table with a clay counter for playing a game, are relics of the simple life of these mountaineers.

Contemporaneous with the castle is a "bee-hive" tomb, 2.90 m. in diameter, 2.10 m. in height. Here the geometric style is fully developed: swords and knives are iron; the only bronze weapons are arrow-heads; fibulae have disappeared, probably superseded by buttons, of which there is one example in gold. The vases are varied in shape, have a good glaze over the pink clay, and are elaborately ornamented. The most unique is a hydria, on one side of which the artist has painted mourning women, on the other a charioteer. These subjects as well as the general decoration recall figured vases of Athenian manufacture in the Dipylon style, but certain differences may be considered characteristic of Cretan art. First, the survival of Mycenaean influence in a rhomboid-pattern which has been traced back to gold ornaments from Mycenae: second, the greater naturalism of the figures as compared with the Dipylon style. Of special interest are fragments of thin bronze plate, engraved with a well-executed design. The motive is Oriental, but the style is Greek. The field is divided into bands, in Oriental fashion, and is filled with sphinxes with backward-turned, helmeted heads. Griffins with up-stretched necks, a fine heraldic type, and a recurring pattern of a man with one or two lions rampant. With superb mastery, the artist has given individual expression to each tiny figure: one of the lions is especially remarkable as a picture of snarling, reluctant obedience, drawn in miniature with a few lines. The human figures are strong, lithe, and dignified. The style resembles that of a gold diadem found in a grave at the Dipylon, to which German archaeologists have ascribed a Greek origin.

Evidently the mountaineer chieftain buried in this tomb was a man of taste. If it is worth while to study the Dark Ages of history as well as the brilliant epochs, and the lives of humble folk as well as of princes, the houses and tombs of the Geometric period at Kavusi are not without value.

6. Professor Myron R. Sanford, of Middlebury College, *The Material of the Tunica and Toga.*

With the passing of the simple toga and tunica of the early years to the more ornate and complicated forms of dress, there came to Rome many new fabrics to vie with the wool. Many Latin writers tell of the use of linen, cotton, silk, and various mixed stuffs. The impression received by students, however, in examining the common

monographs on the subject is misleading, since the idea is usually conveyed that rarely did the newer material actually supplant the wool in making up the various articles of clothing. This inference—probably often a heredity of expression from one authority to another, rather than a lack of knowledge on the subject—is unfortunate. It is clear enough to those who have looked up the references that even the toga, which, of all the garments belonging to the Roman life, seemed least capable of dissociation from the wools of Apulia and Canusium, was occasionally cut from other fabrics.

No one seems to have undertaken the formidable task of an elaborate study of the existing paintings and statuary representing the Roman dress to determine how far the artists intended to suggest various materials in their drapery. In some of the portrait statues and Pompeian paintings it is unreasonable to believe that the clumsy, thick folds do not represent some form of wool, and the lighter and sometimes diaphanous folds one of the thinner fabrics. Frequently in painting, and not rarely in statuary, different materials are to be seen in the clothing belonging to the same figure.

For several years the Latin department at Middlebury College has been interested in experimenting with considerable variety of material in imitation of some of the well-known figures. Besides coming to certain conclusions regarding the graceful or stiff folding of different cloths, these students have realized a fact insufficiently emphasized in the manuals, namely, that no material, from heaviest wool to the most delicate silk, will, of itself, take the beautiful folding of the ordinary statue or painting. The drapery in the latter is always one of two results: it is either taken from the plaits and foldings of the clothing of the model prepared beforehand with the most painstaking care, or it is the conventionalizing of the artist. Not until a trial is made will one realize how elaborate the process must have been to produce the appearance of the toga of a Hortensius, for the accidental disarrangement of which on the crowded street he sent to his friend a challenge. Often the simplicity of certain effects is after elaborate effort. For example, the Commodus of the Vatican collection seems to have the drapery dropping upon the body in the most natural manner. But an attempt to imitate will show that it is a case of art concealing art. The simplicity is apparent only. Occasionally no imitation with material of any sort whatsoever can follow the contortions in the drapery of certain classic figures.

7. Professor A. L. Frothingham, Jr., of Princeton University, *Some Contents of Early Etruscan Tombs and their Connection with Greece and the Orient.*

Not many important points appear to remain undisclosed for the period of undivided Greek influence in Etruria, beginning in the sixth century B.C., but for the preceding four centuries a great deal is still obscure. The collections and excavations made recently under the writer's direction largely for the Etruscan section of the new museum of the University of Pennsylvania, have advanced some new facts in this field. Its series of Villanova urns — the early form of cinerary urn — is most complete and varied both for form and decoration, the examples extending through a period of over four centuries. They give the key-note for early Etruscan pottery. The museum also contains a number of pieces that show how the terra-cotta vases and vessels were derived from bronze prototypes. During the excavations at Narce, the *Tomb of a Warrior* (eighth century) was found which is, perhaps, with the exception of a few discovered at Vetulonia, the most important early tomb found in Etruria for several decades. It contained a decorated high-crested bronze helmet which stands at the head of its class, and a bronze breastplate with similar decoration which is unique in that none other has yet been found in Italian graves. Even the bronze accoutrements of the warrior's horse were buried with him. This armor dates from the close of the Homeric age. Its relation to Oriental and Greek antiquities is not yet clear and would be most interesting to investigate. On the other hand, another tomb of the eighth century yielded the earliest Caryatid figures known, in rude supports placed around the central bulb of two of the vase-holders that served as primitive ovens. Here we already see Greek influence, for the idea of the Caryatid is certainly not Etruscan. These Caryatids are unique in early Etruscan pottery.

But that Oriental art continued to affect Etruria even in the succeeding (seventh) century is shown in a new manner by four vases of identical shape found in a tomb at Corneto-Tarquini. The first pair are imported Phoenician vases of glazed Egyptian ware with figures in low relief, the most perfect of this rare variety yet found: the second pair were of Etruscan black ware, evidently made by a native potter from a mould taken of the imported vases. This is the first time that the direct copying of an imported object by Etruscan artisans has been proved, and it opens up a wide field of possibilities. The most fruitful is the development of styles in terra-

cotta through the moulding of metal objects, either as a whole, or in the form of *appliqué* ornaments set into terra-cotta vases. A later analogous fact is the making of Aretine terra-cotta ware from moulds of Alexandrian silver ware. It is becoming clearer every day that a large proportion of so-called Etruscan jewelry and bronzes are of Greek workmanship or imitations of Greek originals, and the originality of the Etruscans is being curtailed.

8. Mr. Samuel Hudson Chapman, of Philadelphia, *The Discovery of a Doric Temple at Locri, Italy.*

In May, 1897, and as proved by further examination during March, 1900, Mr. Chapman discovered a Doric Temple on the site of Locri-Epizephyrii, Calabria, about 2 miles or 5 km. south of the present town of Gerace, lying directly inland from the tower (Il Torre di Gerace) of the sixteenth century, still standing on the coast road. In a series of pits sunk in line, he was able to trace the broad stones of a Greek stylobate for a distance of 60 feet; and found one capital and a drum of a column. The capital has a straight echinus, showing it to be of the latter part of the fifth century B.C., and measures: abacus, $35\frac{1}{4}$ inches \times 6 inches (0.895 m. \times 0.152 m.); echinus, 6 inches, encircled by ribbon of five incised lines; flutes (twenty), 4 inches (0.105 m.) from centres; circumference, 83 inches, diameter, 26 inches = 0.66 m.; shaft, one drum, length $45\frac{1}{4}$ inches \times $29\frac{3}{4}$ inches \times $28\frac{1}{2}$ inches = 1.14 m. \times 0.745 \times 0.725. The surface is planed $4\frac{3}{4}$ inches to $4\frac{1}{2}$ inches, but the flutes are not cut in.

Within a radius of 100 yards from the temple platform, he found one walled tomb (rifled), and graves of three types:

(1) Greek of the fourth century with terra-cotta sarcophagi of large tiles, 20 inches square, with heavy rims.

(2) Greek. Walled with fine grooved bricks and covered with large tiles with a V groove in the centre. Bodies had been cremated in the graves.

(3) Walled with brick, and covered with tiles from Greek graves of the first class.

Several coins of Locri of the fourth and third centuries were found. About two hundred yards north of the Doric temple, Mr. Chapman found a section of wall and two fine Corinthian capitals of a temple, and determined the site of a Corinthian temple.

9. Mr. William Fenwick Harris, of Harvard University, *The Publication of the Work of the Expedition to Assos in 1381-1883.*

The book will be the most important contribution to the knowledge of the monuments of classical antiquity made by America, and it will represent many Greek civic buildings, such as have not been found elsewhere. It will be of large folio size, 21 inches by 14 inches, and it is proposed to issue it in five sections, each to contain about twenty plates, with brief explanatory letterpress. The price will be five dollars for each part. The work will consist of the plans, drawings, restorations, and photographs of the site of the city, and of the buildings investigated, and will give all those details and measurements which may be of service to students of ancient art. It has been prepared by Mr. Francis H. Bacon, a member of the Expedition, assisted by Mr. Robert Koldewey, one of the most eminent of living archaeologists, who also took part in the original expedition.

Subscriptions may be sent to any member of the Committee, or directly to the treasurer, W. F. Harris, at 8 Mercer Circle, Cambridge, Massachusetts. Subscribers may pay for the parts as issued, or may facilitate the publication by paying in advance either wholly or in part.

The work is one of such great importance that the Committee in charge feels justified in asking for the active coöperation of every member of the Institute.

10. President Benjamin Ide Wheeler, of the University of California, *The Archaeological Work now in Progress under the Auspices of the University of California.*

President Wheeler spoke of the archaeological work undertaken by the University of California (cf. *Am. J. Arch.*, 1900, p. 477), especially of that carried on by Dr. Uhle in Peru, and by Dr. Reisner in Egypt. In Peru, near Huamachuco, are remains of an ancient town, probably antedating the empire of the Incas. Here, at Cerro Amaru and Marca-Huamachuco, walls, tombs, and wells were investigated. Remains of sculpture were comparatively slight. At Viva-cochapampa, the type of walls and houses is later. Dr. Uhle thinks the inhabitants of the country were forced to settle here in the plain, and to give up their mountain cities, when they were conquered by the Incas. Work will be continued.

In Egypt, at Coptos, numerous remains of the early period were found in the ancient cemeteries. At Der el Ballas, a palace and other remains of the later Theban empire were found, including some relief sculpture, many personal ornaments, and other objects. At El Ahaiwah, two cemeteries were investigated, one archaic, the other

of the twentieth dynasty or later. In both, many specimens of pottery, ivory work, bronze, etc., were found. Dr. Reisner's work will be continued. A more detailed report is in the *New York Sun*, December 30, 1900.

FRIDAY, DECEMBER 28. 2.30 P.M.

1. Professor Samuel Ball Platner, of Western Reserve University, *Recent Excavations in the Roman Forum*.

This paper gives an account of the excavations in the Roman Forum, which were begun in November of the year 1898, at the instance of the Italian Minister of Public Instruction, Guido Baccelli, and which have been directed most successfully by Cav. Giacomo Boni, a Venetian engineer.

Commencing with the restoration of one or two of the ruins, and the gathering together of architectural fragments which belonged to the same structures, the work has developed until new excavations have been made in almost every part of the Forum, and many most valuable results, both topographical and archaeological, have been obtained.

The chief discoveries have been made in the Basilica Aemilia, the area of the Comitium and adjacent part of the Forum, the precinct of the Vestal Virgins, the upper Sacra Via, and just recently beneath the level of ground previously occupied by the church of S. Maria Liberatrice.

Many perplexing problems have been introduced, the solution of which cannot be reached until further excavations have brought more light.

2. Professor Louis Dyer, of Oxford, *New Aspects of Mycenaean Cultus*.

Professor Dyer showed with the stereopticon twenty-four slides, by way of presenting new material bearing on Mycenaean Cultus. This material is soon to be worked up by Mr. Arthur J. Evans, Keeper of the Ashmolean Museum at Oxford. It consisted of four groups of pictures. The first group, of four pictures, represented the relics of the remotely prehistoric worship of monoliths found at Hagiar Kim in Malta. This worship had affiliations with Hottentot-like figures such as those at Hagiar Kim. These resemble Professor Cartailhac's Palaeolithic Venus of Brassempouy. Mycenaean cultus was far later, but had affinities with that at Hagiar Kim,

which appeared in Mr. Dyer's second group of pictures, eight in number. Two were of Mycenaean gems, and six were from the recent excavations at Cnossus. A Cnossian fresco showed the religious associations of the familiar sculpture over the Lion's Gate at Mycenae, and these associations were worked out into further detail by the two remaining groups of pictures, which represented published and unpublished Mycenaean gems.

3. Professor John H. Wright, of Harvard University, *The Composition of Apelles's Calumny*.

Many writers have denied that Apelles's Calumny and her Crew, which Lucian says he saw in Egypt, and fully describes in his *de Calumniis*, was a real picture. The speaker, however, contended for its authenticity. He argued that the court scenes painted in fresco on the frieze of one of the large rooms in the ancient Roman house excavated in 1878 in the gardens of the Villa Farnesina (*Mon. d. Inst.* XI), which are of Egyptian origin, are variations on the same theme, and may therefore be used in the reconstruction of the original picture. One of these in particular exhibits almost exactly the same symmetrical composition, the same arrangement of lines and disposition of light and shade as the Calumny. The Aldobrandini Nuptials, which is clearly a copy of an original of about the time of Apelles, shows similar features in its composition. Hence the original picture, as described by Lucian, even when regarded solely from the point of view of composition, may well have been a work of the late fourth century B.C., and since it exhibits other characteristics of Apelles should not be denied to him. The paper was illustrated with lantern slides, including diagrams.

4. Mr. E. P. Andrews, of Cornell University, *Color on the Parthenon and on the Elgin Marbles, recently Discovered Facts and Resultant Theories*.

In 1897, Mr. Andrews discovered on some squeezes made on the east architrave of the Parthenon, traces of fine, carefully incised lines, running either horizontally or vertically, and at regular intervals. These appear only when the surface of the marble is well preserved. These lines suggested that the architrave may once have borne a painted pattern. Further investigation will be necessary to determine the question.

In the summer of 1898, he made squeezes on all places on the Elgin marbles where the surface is well preserved, and where a

painted pattern may reasonably be supposed to have existed. He found no such lines as appeared on the architrave squeezes. Near the edge, however, of the robe spread over the couch on which the figure of the east pediment lettered M by Michaelis reclines, were found plain traces of a painted border. The traces are in the form of two parallel bands, and appear on both the front and back of the statue. The question of color on the Parthenon pediment statues is therefore no longer a matter of theory.

5. Professor Paul Haupt, of Johns Hopkins University,
The Garrett Collection of Oriental Manuscripts.

Professor Haupt exhibited some of the most beautiful specimens of the twelve hundred Oriental manuscripts recently acquired by Messrs. John W. and Robert Garrett, of Baltimore, including a very old Arabic manuscript bound in parchment and written about 1000 A.D., an exceptionally valuable old manuscript written on parchment and containing, in beautiful Maghrabin characters, a considerable portion of the manual of Mālikite jurisprudence, edited by Mālik's most eminent disciple, Ibnal-Qâsim, who died at Cairo in 806 A.D.; an interesting old Arabic manual of botany with pictorial illustrations in colors; a superb manuscript of an astrological treatise, written for the library of the famous opposer of the crusaders, Sultan Saladin (1137-1193 A.D.); and some handsome specimens of Oriental bindings.

The Garrett collection comprises 1171 Arabic and 23 Turkish manuscripts, also a magnificent Persian manuscript with several additional Turkish and Persian treatises bound up with some of the Arabic manuscripts. A considerable number of them are very scarce, and several of them absolutely unique. There are nearly one hundred autographs.

All the various branches of Arabic literature are well represented: poetry and other polite literature, history, biography, geography, travels; lexicography, grammar, metrics, poetics, rhetoric, dialectics; philosophy, logic, encyclopedic works; astronomy and astrology, mathematics; magic, medicine, zoölogy, botany, mineralogy; Koranic exegesis, Mohammedan tradition, jurisprudence and theology, prayers and other religious and miscellaneous works.

We shall hardly ever have a chance again to acquire a similar collection. It is almost impossible at present to secure valuable manuscripts in the East. Now that the United States has become an Oriental power, we must devote special attention to the languages, institutions, and antiquities of the Eastern nations. About half a

million of the inhabitants of the Philippine Islands, in the Sulu Sultanate, and in the Islands of Palauán, Balábac, and Mindanao, are Mohammedans. Several Sulus still make the pilgrimage to Mecca, and our "ally," His Highness the Sultan of Sulu, still recognizes the Turkish Padishah as the Commander of the Faithful. The Koran is the religious, moral, legal, political, and sanitary standard for nearly two hundred million Mohammedans, from the Black Sea down to Zanzibar and from Morocco to the Philippine Archipelago. The United States ought to follow the example of the European Governments in promoting the study of Eastern languages and institutions, and establish, in Washington, an Oriental Seminary, with native teachers under the direction of scientifically trained American Orientalists, for the study of modern Oriental languages, not only for Arabic, Persian, Turkish, Hindustani, Malay, Siamese, Chinese, Japanese, but also for Tagalog, Visaya, and the other Philippine dialects. Benevolent assimilation without due regard to native institutions is impossible.

6. Professor Thomas D. Seymour, of Yale University, *Slavery and Servitude in Homer*.

Three characteristics of a slave have been named by recent writers: A slave may not marry, nor hold property, and he is liable to be sold. All these three marks of servitude are absent from the servitude of the Homeric age. Eumæus has a servant of his own, and thus has *commercium*; Dolius has a wife and children, and thus *connubium*; while no slave is sold away from his home by Greeks. The ordinary Greek word for slave does not appear in Homer in its masculine form, and its nearest equivalent is cognate to the word which is applied to the free soldiers who are subject to Agamemnon on the plain of Troy. Nothing indicates the existence in Homeric Greece of a class of men who had been the owners of the land, but who (or whose ancestors) had been reduced to a state of servitude by a conquering tribe. The three other main classes of slaves exist: (1) slaves by descent, (2) slaves by capture in war, and (3) purchased slaves; but no class is inferior to the others in privileges or estimation.

The Homeric family is patriarchal, and in general the interests of master and man are counted identical. Male slaves are not known to the household life of the Homeric age. Not even a porter is found at a palace gate. The Achæan chieftains took no body servants with them on their expedition against Troy, nor the Argonauts when they went for the Golden Fleece. Slave labor has not yet

driven out free labor. Princes cook their own food, tend flocks, and build their own houses. Princesses fetch water from the public spring, and assist in laving the family linen, in addition to spinning and weaving. The constitution of society on Olympus in this agrees with that on earth: the gods had no servants. Athena does not become a dressmaker by fashioning the robe of Hera, nor Hebe a waiting-maid by bearing the cup of nectar and preparing the bath for Ares.

The slave trade, so far as it exists, is in the hands of Phoenicians and Taphians,—the chief traders, and the most notorious pirates of the poems. The purchased slaves of whom we read in Homer are only three in number. A tradition that the early Greeks had no slaves is quoted with approval by Herodotus, and by other early writers. Certainly, little which we should call slavery is known to Homer, but the condition of the weaker depended largely on the will and power of the stronger.

7. Professor Mitchell Carroll, of the Columbian University, *Aristotle's Theory of Sculpture*.

Aristotle, who is the founder of the science of aesthetics, has nowhere treated specifically the art of sculpture, yet the *Poetics* is replete with observations stated primarily for poetry, that Aristotle applies equally to painting and by implication to sculpture, as is shown by passages in his other works.

Thus—to treat for the moment sculpture merely—he regards it as one of the modes of *mimesis*, which, according to his theory, constitutes the essence of the fine arts; he finds the origin of sculpture in the instinct of imitation; he notices briefly the nature of the pleasure derived from this art; as to the manner of imitation, he finds color and form the vehicles of expression in sculpture (and painting); he treats at great length the objects of imitation or the subject-matter of sculpture, and defines three schools applicable to this art as well as to poetry and painting—Idealism, Realism, Caricature. As he prefers plot to character-drawing in poetry, so he prefers drawing to coloring in the formative arts. He distinguishes between an idealism of expression and an idealism of technique; of the former examples are Sophocles and Polygnotus and Phidias, of the latter Euripides and Zeuxis and Lysippus.

In this day when aesthetic theory has reached such extensive development, the observations of Aristotle no doubt seem trite and crude, yet in the formative arts, as in poetry, we must confess that he has laid along certain lines the foundation on which later aesthetic critics have built up their theories.

8. Dr. Charles Peabody, of Cambridge, Mass., *The So-called "Plummets."*

These articles are found in nearly all parts of the United States. The series may be said to begin with long flat pendants, continue through the literally plummet-shaped objects, and end in the thick globular or lozenge-shaped specimens that themselves merge into sinkers. The size may vary from a length of an inch or less to three or more, the great majority lying between. The material is for the most part local, and may vary from ordinary stone to slate, hematite, and even quartz. The objects have been found in greatest abundance in Maine, Massachusetts, Florida, and California, while many of the finer specimens are from the mound-building civilization of the middle west. They occur in graves, in mounds (in Florida), and as surface finds. Their occurrence as a whole tends to strengthen the theory that they had some peculiar value attached to them.

The uses suggested, or which may be suggested, for them may be classified as follows. I. In connection with fishing: (1) drag line sinkers, (a) above the hook, (2) drag line sinkers, (b) below the hook, (3) fishing-line sinkers, (4) net sinkers, (5) bait and hook combined. II. In connection with the chase or warfare: (6) sling stones, (7) black jacks, (8) the bolas. III. In connection with textiles: (9) twine or line twisters, (10) spinning weights, (11) netting weights, (12) weaving weights. IV. In connection with hitting or grinding: (13) pestles, (14) hanging pestles, (15) paint stones, (16) rubbing stones, (17) hammers. V. As ornaments: (18) earrings, (19) pure pendants. VI. With superstitious significance: (20) amulets, (21) charm stones, (22) lucky stones. VII. (23) As drum rattles. VIII. (24) As plummets. IX. (25) As game stones. In favor of their use in fishing is the fact that they nearly all come from near possible fishing grounds, and that they are fairly well fitted for the purpose. Against this is the fact that in many places other undoubted sinkers are found at the same time, and such, or mere notched pebbles, are almost always more easily procured and are quite as well adapted to the purpose. In favor of their use in hunting, etc., we have some statements from early pioneers and the analogy of the Esquimanu bolas; to the contrary stand the meagreness of direct evidence and the ease with which most of the "plummets" could be lost or broken. For their use in spinning, etc., is the analogy of many foreign primitive peoples, but again there is a great lack of direct evidence. On the other hand, there is a good deal of evidence direct and from analogy that they were used as

charms or talismans. It is not improbable that in Maine and Florida some were sinkers, in Florida, too, some ornaments; in Maine some may have been used in bolases; throughout the middle west they may be called weaving-weights, perhaps, and in California, charm stones. It seems very likely that all, whether used originally in daily life or not, gathered about them later some aspect of superstition.

SATURDAY, DECEMBER 29. 9.30 A.M.

1. Dr. George H. Chase, of St. Mark's School, Southborough, Mass., *Shield Devices among the Greeks*.

The use of shield devices among the Greeks goes back to prehistoric times, for we find them represented upon monuments of Mycenaean date. We can distinguish two classes of emblems—those which were intended simply for ornament (decorative devices), and those which were intended to make the shield more terrible in appearance (“terrible” devices or *apotropaea*). The same two classes may be recognized in Homer's descriptions of the shields of Achilles (decorative), Athene and Agamemnon (terrible). With the historical period (from about 700 B.C.) our sources, both literary and monumental, became much more copious, and reveal no less than ten classes of devices, as follows: (1) Purely decorative devices. (2) Devices intended to inspire fear (*apotropaea*). (3) Devices which have reference to the worship of a god or goddess. (4) Devices chosen with reference to the nationality of the bearer, among which we can distinguish: *a.* devices borne by private individuals; *b.* devices borne by whole armies. (5) Devices chosen with reference to some personal characteristic. (6) Devices which refer to the deeds or the fortunes of the bearer. (7) Devices chosen with reference to the descent of the bearer. (8) Devices which are copies of works of art. (9) Devices which are symbolic of the bearer's name. (10) Devices chosen from mere caprice, with no especial significance.

2. Professor Edgar S. Shumway, of the University of Pennsylvania, “*Satan's Throne*” and *Michelangelo*.

The aim of the paper is to indicate a certain parallelism as well as an historical connection between Greek Romanticism and the Romanticism of Michelangelo. It briefly describes Pergamon, giving some salient points in its history, including the origin of the “first-bloom” of Pergamene art, and of the altar of Zeus, which is

held to be the throne or "seat of Satan" referred to in the book of Revelation. Certain characteristics of the art of Pergamon are given. That art is classed as essentially belonging to Romanticism. The gap between Michelangelo and Pergamon is traversed. The development of the romantic in his art is indicated. Attention is called to the fact that the marbles which most interested him were from the Pergamene School, or by artists under the Pergamene influence. The assertions of writers on Michelangelo, that he had no progenitors in art, and that his art is the direct opposite of Greek art, are claimed to be ill-based. The question regarding the real difference between "classicism" and "romanticism" is raised, and a parallel drawn between Greek and Florentine artists.

3. Professor A. L. Frothingham, Jr., of Princeton University, *Did the Triumphal Arch originate with the Romans or the Greeks?*

A passage in Pausanias's *Attika* indicates that triumphal and memorial arches were not an original Roman invention without Greek prototypes. In the course of his itinerary through Athens Pausanias says, in connection with the Agora, or Market-place: "On the way to the colonnade which from its paintings is called the Painted Colonnade, there is a bronze Hermes, called Hermes of the Market, and near it is a gate. On this gate there is a trophy of a cavalry victory of the Athenians over Plistarchus, who was in command of the cavalry and mercenary troops of his brother Cassander." Now, it is known that this Plistarchus commanded the Macedonian garrison at Chalcis in 312 B.C., though the exact date and circumstances of this Athenian victory are unknown.

What Pausanias describes, therefore, is a free-standing gateway in the market-place of Athens, surmounted by a group of sculpture, and commemorating a victory. It appears to have been flanked by a line of hermae on both sides, and probably stood in the centre of the square, with the street passing beneath it, though it may possibly have been on one side of the square. There is nothing in the text of Pausanias to indicate whether the gate was arched or not, but this is a secondary consideration. The probabilities are that it was formed (like the Augustan entrance to the Roman market at Athens) of an architrave surmounted by a gable and resting on a group of columns or a pier at each end. The earliest Roman arches extant—though nearly three centuries later—show how such a Greek monument may have been shaped, if we remove the arcade inserted by Roman architects within this framework. Such are the Julian

and Augustan arches at Orange, Aosta, and Rimini. It is well known how in the colonnades, basilicas, theatres, amphitheatres, and other public structures the Romans adopted the Greek scheme with the insertion of arches under the architrave.

It has been already proved that the other two forms of Roman memorial monuments—the memorial column and the trophy—spring from Graeco-Macedonian prototypes; and this now becomes probable also in the case of the third and most important group of the Memorial Arches.

4. Professor A. L. Frothingham, Jr., *The Mediaeval Chapel of the Sancta Sanctorum at the Lateran in Rome.*

Before the Renaissance the Popes resided at the Lateran Palace, and its chapel of S. Laurentius (*Sancta Sanctorum*) occupied the same position as Papal Chapel that the Sistine Chapel has since occupied at the Vatican. Also, from its numerous important relics and sacred objects, this chapel was held in unsurpassed veneration—there was no holier place in the world, says its inscription. In the destruction of the Lateran by the Renaissance Popes this chapel has alone remained, at the head of the Scala Santa, but it is practically unknown, as access to it has been forbidden since the Renaissance, even to the clergy that tend it. By special Papal permission—almost never granted—the writer was enabled to enter and study it, finding it to be the greatest gem of mediaeval art in Rome. The original chapel appears to have existed in 600 A.D. or earlier, but the present structure, including the immense base on which it is reared, dates from Pope Nicholas III, about 1277 or 1278. The artist who built and decorated it was Cosmatus, of a famous family of Roman artists.

The chapel is apparently the earliest known example of the transition in the Roman school from a Neo-Classic to a Gothic style in both architecture and painting. It is unique in its variety of vaulting methods in place of the usual Roman wooden roof, and is the only remaining example of a mediaeval vaulted concentric structure in Rome. Its apse has a low ellipsoidal dome; its vestibule a barrel vault; while the chapel itself is surmounted by a high Gothic ribbed cross-vault. The ornamentation is rich, perfect in detail, and covers every inch of surface, reminding one, in this, of early Christian structures at Ravenna. The mosaic patterns of the floor are more varied and delicate than in any other Roman pavement: the walls have, first, a high dado of beautiful marble slabs; then, a blind gallery of trefoil arches resting on exquisite twisted columns, each arch

enclosing a figure in fresco; and finally, eight large fresco compositions cover the wall spaces beneath the vaulting compartments, which themselves are frescoed with the four Evangelists on a starred blue ground. Mosaics, as was usual, decorated the apse, especially the small dome. Notwithstanding restorations under Sixtus V, this whole scheme of frescoes and mosaics is of especial importance for the history of the revival of painting, because recent criticism has made it probable that Giotto, instead of being Cimabue's pupil, was trained in Rome (not Florence) and developed to a higher perfection the style of some Roman master, perhaps this very Cosmatus, whose works at the Sancta Sanctorum were executed when Giotto was a boy of eleven or twelve.

5. Professor J. R. Wheeler, of Columbia University, *A Bronze Statue of Hercules in Boston.*

This is a statue 1.01 m. in height, and represents the hero with the right hand extended, very likely in friendly greeting, with the club in the left hand and the lion-skin over the left arm and shoulder. The view was taken that the statue is a Roman work, presumably of the Republican period, and that it shows a modification and adaptation of Greek types of the fourth century.

6. Dr. Edmund von Mach, *The Statue of Meleager in the Fogg Museum of Harvard University.*

The statue of Meleager now in the Fogg Museum of Harvard University was excavated at San Marinella near Rome in 1895, and deposited in Cambridge as an indefinite loan by Mr. E. W. Forbes (*Annual Report of the President of Harvard College, 1898-1899*, p. 284). It was mentioned in *Not. Scavi*, 1895, *Röm. Mitth.* X, p. 92, and briefly described by R. Norton, in *Harvard Graduates' Magazine*, June, 1900.

A careful examination of the statue shows its superiority over the Berlin torso, and also over the Medici head. In the Harvard Meleager the teeth are represented and carefully undercut from the upper lip and the roof of the mouth behind. The shape of the head is less bullet-like than the Medici head, and in actual measurements agrees more closely with the Vatican head. The modelling of the entire statue is superb: "its nobility and beauty," it is said, "as a whole, seem to warrant the belief that it is Greek work of the fourth century." This, I believe, is contradicted by the abundant use of marble supports (eight or more) and a few signs of carelessness. I believe the statue to be a work of the time of Augustus. An interesting parallel is found on a slab from the Ara Pacis Augusti

(Wickoff, *Roman Art*, pl. ii). The statue is a copy, or more probably an adaptation, of an earlier type. This type must be later than Scopas on account of the treatment of the hair, and the peculiar way of expressing character by the lips (cf. a head of a woman from Pergamon in the Berlin Museum, Cast in the Boston Museum, Robinson, *Catalogue*, 162).

7. Dr. A. S. Cooley, of Auburndale, Mass., *The Excavations of the American School in Corinth*.

Dr. Cooley treated of the topographical aspects of the work at Corinth, presenting a map of the village and excavations made from his surveys in 1898 and 1899, and, based on this, a conjectural plan of the ancient Agora and adjacent parts, showing locations of objects mentioned by Pausanias (II, 2, 5-4, 7), so far as these have already been found or can be pointed out with probability.

The boundaries of the Agora and of the *temenos* of the temple of Apollo were determined from data given by ancient remains, certain natural conditions, and indications from present streets and walls, which last it seemed legitimate to regard, as there has been a continuous settlement here since the refounding of Corinth by Julius Caesar, and no modern "improvements" have caused changes. In fact, these indications agree well with the data given by remains from antiquity.

The Propylaea and a paved road discovered in two trenches determine entrances to the Agora on the north and south. Those of the roads to Cenchreae and Sicyon, as well as the roads themselves, were indicated on the plan conjecturally.

The probable sites of the temples of Fortune and of All the Gods are indicated by their proximity to the unique fountain recently discovered. The temple of Hermes probably occupied the site of the old church of St. John, while that of Octavia, "above the Agora," stood where the present village church stands.

We can now reconstruct the Propylaea by which Pausanias left the Agora, going north on the grand avenue, which is forty feet and more in width, paved with slabs of white limestone. This is certainly the "straight road toward Lechaëum," and has been partly uncovered.

A possible location for the statue of Heracles outside the Propylaea was pointed out, and a glance taken at Pirene—the great court before the façade of six cave-like chambers, on the other three sides semi-circular buildings with niches for statues, one of which has been found, and in the centre a circular basin.

The next object in the description is a seated Hermes with the

ram. Dr. Cooley has identified its location a short distance north of Pirene and close to the paved street, a coin of Antoninus Pius's time (Gardner, *Types of Greek Coins*, pl. xv, no. 24) furnishing most valuable evidence.

Further groups of statuary and the famous Baths of Eurycles, together with those erected by Hadrian, can be located within narrow limits.

Of the objects on the Sicyon road the temple of Apollo, the fountain of Glauce, the theatre, and Lerna may be regarded as established beyond reasonable doubt, and by the aid of these fixed points we may easily determine where to search for others not yet discovered, the monument to Medea's children, the Odeum, and the temples of Athena Chalinitis and Jupiter Capitolinus.

The following papers were read by title :

1. Professor Edward Capps, of the University of Chicago, *Ἐπὶ τῆς σκηνῆς and Similar Expressions*.

During the last ten years the use of the word *σκηνή* with *ἐπὶ*, *ἀπὸ*, and other prepositions has played a part in discussions relating to the stage of the Greek theatre. Although a knowledge of the exact meaning of these expressions is manifestly of the highest importance for a critical estimate of the force of the arguments based upon them, yet no one has undertaken to collect and analyze the numerous passages in Greek literature in which they occur. In the classical period the usage is practically confined to Aristotle's *Poetics*. A study of the context in each instance shows that Aristotle does not intend to designate the position of the actors as opposed to that of the chorus, but includes both elements in the expression, which is equivalent to "in the theatre." There is, therefore, no implication of height in the preposition *ἐπὶ*. The same thing holds good for later times. *ἐπὶ τοῦ θεάτρου* is found as a parallel phrase, and even *ἐν τῇ σκηνῇ* occurs. The explanation of this use of *σκηνή* in the general sense of "theatre" is found in the history of the two words *σκηνή* and *θέατρον*. In view of the strict limitation of *θέατρον* in early times to the meaning "spectators," the word *σκηνή* was naturally chosen for the general idea of "theatre," "dramatic or mimetic performance." The modern expressions "on the stage," "auf der Bühne," etc., while exact idiomatic equivalents of *ἐπὶ τῆς σκηνῆς*, unfortunately import into the ancient phrase a connotation derived from the arrangement of the modern theatre, and have thus helped to perpetuate an error concerning the Greek theatre.

2. Dr. George Dwight Kellogg, of Yale University, *An Unidentified Building near the Forum next to S. Adriano.*

The site of the recently excavated Basilica Aemilia is occupied in part by a late structure of the time of Theodoric. In the corner of the basilica next to S. Adriano there is a bit of wall standing, having on the interior a niche facing a small square chamber, on whose diagonals are the springings of brick arches. In the manuscript of Orsini, Vat. 3439 fol. 46, there is a drawing of the corner of the entablature of this building, probably by Panvinio, whose almost undecipherable note is as follows: *T. Vulcani haud procul a foro paulo supra. Dionysius libro 2, ubi hodie S. Hadriano ubi inventus lapis Farnesiorum spoliatus a Bellaio et Cesarino. Ornamenta portici eius ex Tibertino, foderatus (sic) ex marmore nobili. In nichio ante porticum fuit vas porphyreticum quod fuit res apta aedibus, postea ad uillam Iuliam. Pes eius ferreus est. Bellaius naufragio periit.* The first part of this note, with an account of the building, may be found in Huelsen's article in the *Annali*, 1884, pp. 323 ff., also in Lanciani's monograph on the Senate-house. This corner of the basilica looks as if it had been changed in late times into a private mansion. We may have here the *domus palmata* (see De Rossi, *B. Com. Roma*, 1887, p. 64, Jordan, 1², pp. 258-259, etc.) mentioned by Cassiodorus, *Var.* IV, 30. Theodoric writes to Albinus, a Roman noble, granting him permission to erect new buildings near the Forum near the Senate: *curbae (al. legunt Curiae) porticus quae iuxta domum palmatam posita forum in modum areae decenter includit, superimponendis fabricis licentiam condonari.* The *Domus Palmata* is of some interest, as it is mentioned several times. Lanciani (*Ruins and Excavations*, pp. 239-240) considers it the same as the house of Anicius Glabrio Faustus "quae est ad palmam," from which the Codex Theodosianus is said to have been promulgated in 438.

3. Mr. Charles O'Connor, of Iowa College, *Some Peculiarly Constructed Conduits in the Roman Forum.*

Among the structures uncovered during the recent excavations in the Forum are three conduits which look like sewers but have the lower half of one wall projecting into the interior so as to form a ledge or shelf about 0.30 m. wide and 0.65 m. high. The conduits themselves, which are built of large blocks of ash-colored tufa and arched with the same material, are about 1.50 m. high and 1.00 m. wide. One lies beneath the stairway of the Temple of Saturn, one partly beneath the approach of the Temple of Concord and partly

under the Clivus Capitolinus, and the third, which is a branch of the second, is also under the Clivus Capitolinus. Their general direction is from the Temple of Vespasian toward the Rostra.

In spite of their general resemblance to drains, it is hard to believe that these conduits were drains. The ledge could serve no purpose in a drain, the bottom and sides, although constructed of soft stone, show no signs of erosion, and in descending the conduits divide while drains would unite. Several lines of lead pipe, lately uncovered near the monument of Stilicho, which extend toward the Rostra, a fragment of lead pipe lying in a channel of tiles at the end of one conduit, fragments of a small stone channel or trough still containing a calcareous deposit, which was destroyed in building the larger conduits, and fragments of a similar channel lying on the ledge of one conduit, all indicate that at various times a supply of water was brought down from the Capitoline through this place. So it seems reasonable to conclude that the conduits were built to carry water pipes and that the pipe was laid upon the ledge to preserve it better and to facilitate the work of the plumber. Some method like this was desirable in order not to disturb the pavement of the Clivus Capitolinus, or the temple foundations, by which nearly the whole space was filled, when a water pipe burst. Where the third conduit branches from the second, there is a small opening from one to the other at the level of the ledges, through which the pipe passed, and an arch in the lower part through which the plumber could creep.

The position of the conduits, which all seem to have been built at about the same time, with reference to the foundations of the temples, shows that they were probably built just before the restoration of the temples of Saturn and Concord under Augustus.

4. Dr. Ernst Riess, of Manhattan College, *The Magical Papyri and Ancient Life*.

The paper undertakes to show the interest attached to these much neglected remains of ancient writing.

The edict of Diocletian in 296 A.D. intended to put an end to all witchcraft. Evidently, however, he did not succeed, or the books before us would no longer exist. But they found a safe resting place in the tombs of the dead.

Then the question is discussed to which age these papyri belong, and the conclusion is reached that the two centuries after Hadrian's death is the most likely time. This must be understood, however,

only of the collection as a whole, for it is evident that the single components must have circulated for some time before.

Who were the authors of these papyri? Three nationalities seem to have been the main contributors; viz. Jews, Egyptians, and Greeks. This seems to point to Alexandria and its inhabitants. The writer tries to show, however, that this assumption is not binding for the elements of the collection. The three sources and their traces, in the beliefs and customs mentioned in the papyri, are discussed in detail. Attention is also called to the remarkable absence of Roman influence.

The question is then taken up, what can we learn from our books about the way of living, and the feelings and thoughts of the authors? The estimate reached is a pretty low one. This is partly offset, however, by some elevated and high-spirited passages, one of which is given.

The paper closes with an outlook upon the religious vista opened up by the papyri.

5. Mrs. Sara Y. Stevenson, of Philadelphia, *Notes on Some Important Objects in the Egyptian Collection of the University of Pennsylvania.*

Mrs. Stevenson referred to objects recently received from Mr. Flinders-Petrie's excavations for the Egypt Exploration Fund at Abydos. Six out of eight of Manetho's Kings for the first dynasty have with more or less certainty been identified and a full series of fragments inscribed with their names is now in Philadelphia. Although the relative archaism of these texts is striking, the execution of the engraving on hard stone and on certain rock crystal fragments is amazingly fine, and the pieces of ivory inlay betray a wealth of decoration which sets back certain familiar decorative motives of industrial art to the dawn of History. The use of elegant furniture also points to a degree of refinement quite beyond that of a primitive stage of society.

Many points of interest will be raised by the new texts. One of them is the relation borne by the standard upon which stands the divine hawk to the hieroglyph for "Neter," i.e. God. This has hitherto been regarded as an axe. An objection to this view has always been that, as an object, it differs from the known types of Egyptian axes. On the Abydos fragments of the first dynasty, the ideogram for "Neter" is depicted as a pole from which two horizontal bars stretch forth, the upper one of which is slightly bent upward,—quite unlike the later blade-like form of the "Neter" ideogram (see

Amélineau, p. xxxvii, also Petrie, XXV, 51, XIX, 7; XII, 2),— whilst the axes contemporaneously represented already assume specialized forms unlike the "Neter" sign.

It therefore appears that this important ideogram was not an axe as is constantly assumed. What it was is still doubtful, but the new texts furnish a suggestion worthy of notice. On a fragment of the reign of Merpaba in the Philadelphia collection is represented the Horos hawk standing on his standard, and here the standard assumes exactly the form of the ideogram for God "Neter," only streamers hang from the rear. The same form recurs on other fragments (Amélineau, VIII, and Petrie, VI, 4-V, 12, and also 79 and 80). In the latter examples, dating from the last reign of the first dynasty, and from that of Perabsen (second dynasty?) no streamers occur. Such is the similarity that such signs on certain texts of Kha Sekhemui have been read "Neter," but are now seen to be the standard under the sacred bird (Petrie, p. 19).

In the detailed hieroglyphs of Medum the "Neter" ideogram was often drawn with two and once even three bars, and was painted yellow, and Mr. Petrie has called attention to a lack of resemblance to an axe and to the fact that this ideogram was grouped among textile offerings. The recently discovered archaic specimen of the sacred standard on which stands the Hawk—which in the Pyramid texts is used as equivalent for God—tends to indicate that the frame of the sacred object divested of its textile adornments underwent a conventionalizing process until its simple outline became in current use the ideogram for the divine. However this may be, to-day as when the Pyramid texts were discovered in 1884, a new and difficult chapter in the history of Egyptian palaeography is being opened to scientific ingenuity.

Of the following papers, which were withdrawn, no summaries have been furnished:

6. Dr. Edgar James Banks, of New York, *Ur of the Chaldees and its Excavation*.
7. Dr. Joseph Clark Hoppin, of Bryn Mawr College, *Aglaophon's Portrait of Alcibiades*.
8. Professor James M. Hoppin, of Yale University, *An Inquiry Respecting the Alleged Works and Place of Scopas in Greek Sculpture*.
9. Professor W. S. Ebersole, of Cornell College, *A Favorite Representation of a Greek and an Amazon in Conflict*.
10. Miss Alice C. Fletcher, of the Peabody Museum,

Cambridge, Mass., *The Significance of the Garment*. 11. Professor Allan Marquand, of Princeton University, *The Morgan Collection of Gold Objects recently Presented to the Metropolitan Museum*. 12. Professor Marquand, *Robbia Pavements*. 13. Mr. Edward Robinson, of the Boston Museum of Fine Arts, *The Arretine Pottery in the Boston Museum of Fine Arts*. 14. Professor W. S. Scarborough, of Wilberforce University, *Observations on the Topography of Pylos and Sphacteria as Described by Thucydides, Book IV*. 15. Professor John Williams White, of Harvard University, *Tzetian Scholia on the Aves of Aristophanes in Cod. Vat. Urb. 141*.

NOTES ON THE "THESEUM" AT ATHENS

I. THE COVERING OF THE PTEROMA

OF all the remains of ancient architecture to be found to-day in Athens, the most interesting, in many respects, is the Doric temple commonly known as the Theseum. This building is not only the best preserved Greek temple in existence, but — what is of especial importance to the archaeologist — the only one of which any considerable portion of the upper part remains. The ancient roof, which was of wood, has of course long since disappeared, but the greater part of the ancient covering of the pteroma and of the front and back porches still exists as it was in antiquity. It is a study of this portion of the building which I propose to make in this paper.

The part of the Theseum still standing consists of the whole of the cella wall and of the peristyle with its entablature including the front and back porches with the pediments, and considerable portions of the frames with openings (*φαινόμενα*) which cover the pteroma and the porches. The arrangement of the roof as it exists to-day may most easily be understood by referring to the accompanying diagram¹ (Fig. 1).

¹ Cella covered by modern pitched roof of wood.

Portico at east end covered with a coating of clay.

Dark squares indicate openings having covers on them.

x on Frames A and D denotes lids of terra-cotta from Byzantine times.

DIMENSIONS

Total length	32.62 m.
Total width	14.595 "
Width of coping of pediment	1.42 "
Width of side wall	1.45 "

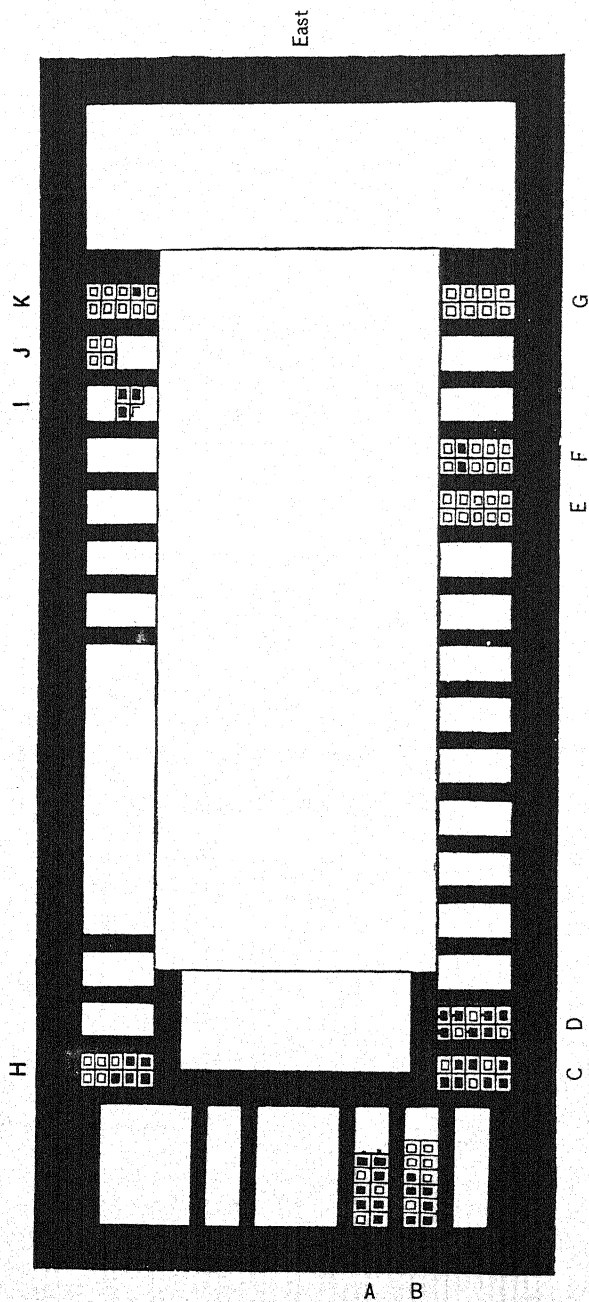


FIGURE 1.—PLAN OF THE ROOF OF THE THESEUM AS IT EXISTS TO-DAY, SEEN FROM ABOVE.

It will be noticed that the covering of the pteroma consists of a series of rectangular frames extending from the cella wall to the top of the colonnade, and that every frame, except the one at the southeast corner, has ten square openings in it. This one frame has eight openings. The frames over the porches are longer. Those on the west have sixteen openings each; and those on the east, twenty. The latter cannot be seen from

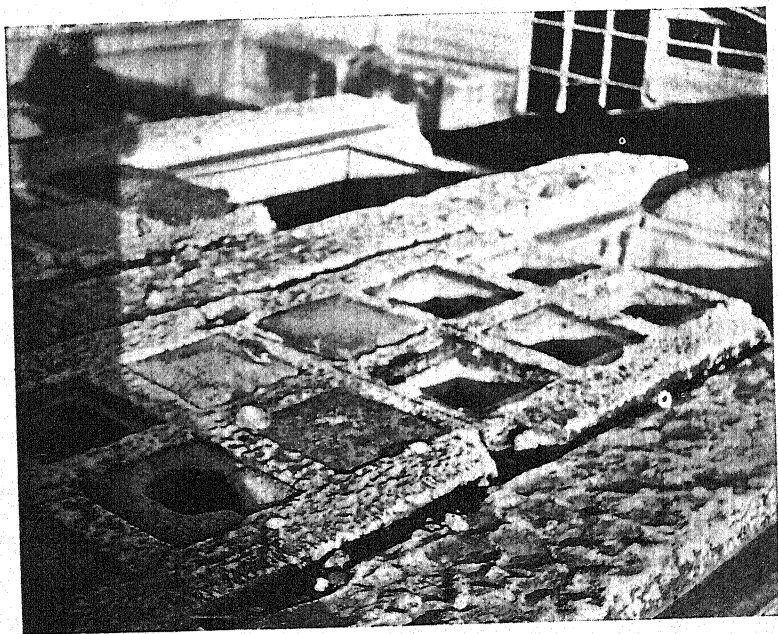


FIGURE 2. — FRAMES ON WEST END.

above, as they were covered with a layer of clay in Byzantine times. The size of these frames varies somewhat. Those over the west porch are approximately 0.96 m. \times 3.22 m.; and those

Frames on west end, length	3.22 m.
Frames on west end, width	0.96 m. to 0.97 "
Frames on north and south sides, length	2.18 "
Frames on north and south sides, width	0.96 "

Beams separating frames vary from 0.26 m. to 0.31 m. in width, but the average is 0.30 m.

Square openings in frames vary from 0.25 m. \times 0.25 m. to 0.26 m. \times 0.265 m.

over the pteroma, 0.96 m. \times 2.18 m. They are not cut out of a single slab of marble, but are usually of two pieces for the pteroma and three for the porches.¹ The size of the openings in the frames also varies, from 0.25 m. \times 0.25 m. to 0.26 m. \times 0.265 m. Each opening has a shoulder cut in the frame, and a square cover of marble fitting in closely and completely covering the hole (Figs. 2 and 3). These covers, and the openings

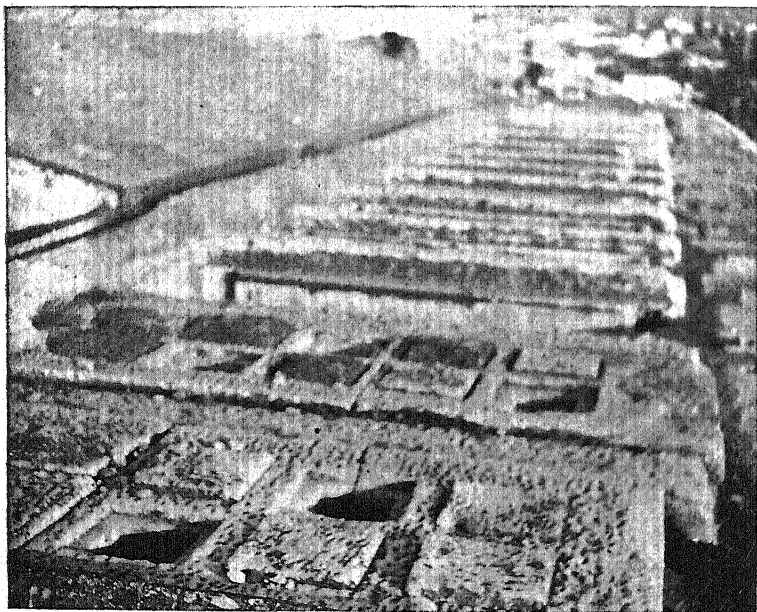


FIGURE 3. — FRAMES ON SOUTH SIDE.

which they cover, each bear a letter or figure, that on the cover corresponding to that of the opening into which it fits (see Figs. 4 and 5). Some of these letters were seen by Ross, and

¹ The divisions in the frames remaining in whole or in part are as follows. The numbers indicate the number of openings in the frame, the upper number always being the part toward the cella wall.

A	B	C	D	E	F	G	H	I	J	K
$\frac{4}{6}$	$\frac{6}{6}$	$\frac{4}{6}$	$\frac{6}{4}$	$\frac{4}{6}$	$\frac{6}{4}$	$\frac{4}{4}$	$\frac{6}{4}$	$\frac{6}{(4)}$	$\frac{(6)}{4}$	$\frac{4}{6}$

commented on by him;¹ and later on a fuller, though not complete, list of them was published by Gurlitt.² The letters as

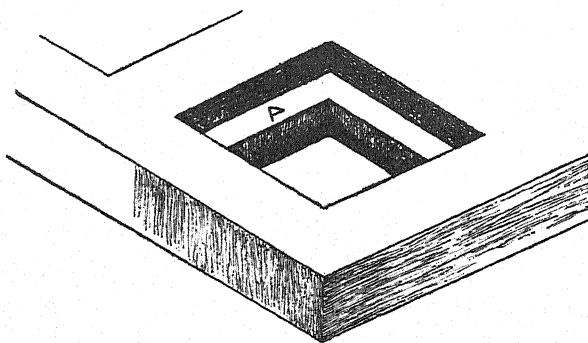


FIGURE 4. — OPENING IN FRAME, FROM ABOVE.

they exist to-day, both on the lids and on the frames, and their positions in the different frames, are given below. The upper part of each frame is the part towards the cella wall.

FRAMES

A	B	C ³	D
	κ	⌊	Δ
Η	—	⊖	⊖
Α	Η	⊖	⊖
>	Ε	⊖	⊖
Β	Ζ	⊖	⊖

¹ Ross, *Das Theseion und der Tempel des Ares in Athen*, pp. 55 ff.

² Gurlitt, *Das Alter der Bildwerke und die Bauzeit des sogenannten Theseion in Athen*, pp. 75 ff.

³ In this section the characters are not inside on the shoulders, but outside to the left of the openings, except ⊕, which is on the frame between the opening where it is placed in the diagram and the one above it.

E ¹	F ²	G ³	H ⁴
⌢	△	⌢	≡
▽	B	—	+ —(?)
	^	→	△
	x	○	H
E(?)		⊕	▽
∇	E	⊔	□
▷	△	◇	>
⌢	—(?)		⌢
	H		

I ⁵	J ⁶	K
⌢	I	> (?)
x	○	□
	⌢ (?)	<
		I
		○
		+
		⊕
		>
		⌢
		⌢

In addition to these, letters appear on several fragments of frames, as follows:

FRAGMENT 1.	FRAGMENT 2.	FRAGMENT 3.	FRAGMENT 4.	FRAGMENT 5.
⌢	⊕ (?)	⌢	⌢	I (?)
B	⌢	⌢	⌢	

¹ The three lower letters on the right (> ⌢ >) are on the frame to the right of the openings; the E(?), on the frame to the left.

² The six upper letters are above the openings, the other three are below. At a short distance to the right of the lower part of this frame are cut ⌢

³ The four lower figures are to the right and left of their openings respectively.

⁴ H is to the left, ▽ below, and ⌢ and □ to the right of their respective openings.

⁵ The ⌢ is above its opening.

⁶ Letters are to the left and right of their openings, respectively.

All the letters, except where otherwise indicated, are on the inner parts of the frames, as shown in Fig. 4 above. The way in which these letters are arranged is peculiar. Some-



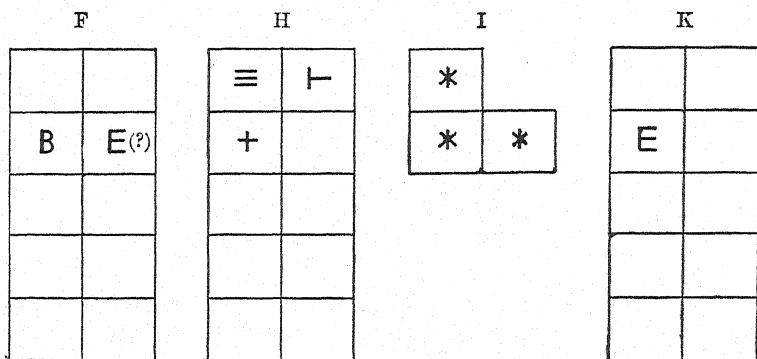
FIGURE 5. — CROSS-SECTION OF OPENING, WITH LID IN PLACE.

times there is a regular sequence, as in frames B, D, or F; and again, there is none. This may be partially accounted for by the division of the frame into two parts, thus causing a break in the series. Some few openings have two letters, as in frame D, but in these cases one of them must be intended as a correction of the other. The actual size of the letters is shown in Fig. 6, where the two forms are drawn from squeezes.

The characters on the lids are on the under side, with the exception of those on frame C, which are on top.¹ Lids which cannot be moved are marked *. The letters are as follows:

A		B		C		D	
				⌒			
	N			⌒	⊕		
A		I		⌒	⌒		
B	Δ	^	E	⊖			
	A		Δ	⌒	⌒		A
		*	A				

¹ It seems likely that this frame, and perhaps also those parts of the others where the letters are outside of the openings, belong to later restorations of the roof. The work appears less careful than in the other cases.



On a lid which is broken in two is a K.

It will be noticed at once how elaborate this system of lettering is. Every one of the small openings, as well as the lid which covers it, has its letter. In some few cases, it is true, these letters do not correspond, but that is because some of the lids have been moved from their original places. What can be the object of this careful lettering? It has been suggested that the letters are simply masons' marks,—as, for example, by Gurlitt,¹—but this is not a satisfactory answer. No mason, or body of masons, would have taken the trouble to cut this elaborate set of letters, unless they were to have some practical use;

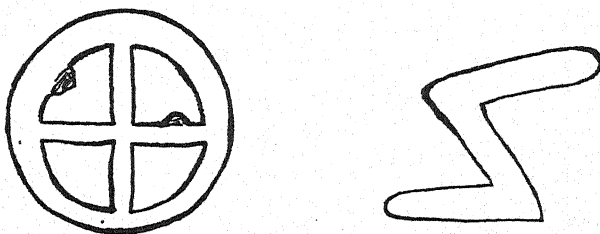


FIGURE 6.—LETTERS FROM FRAME K, ACTUAL SIZE. FROM SQUEEZES.

and as far as the cutting of the frames and the covers is concerned, they were quite unnecessary. We cannot suppose that they were intended to aid in fitting on the lids after the frames.

¹ *Op. cit.* p. 75. No mention is made of them, however, by Otto Richter, in his work, *Ueber antike Steinmetzzeichen*.

had been put in place, for the small number of letters used would have been a cause of confusion rather than a help. Furthermore, no lids could have been put in place on the building until all the frames were laid and the roof-beams in place, otherwise they would have been in great danger of being broken. Putting these facts together, it seems likely that the letters on the lids, at any rate, were cut after the frames were in place, and that few forms were used, because the lids were to be moved only short distances from their places. Accuracy in lettering was, however, required, as is seen by the use of two letters in some of the openings, one of the letters being a correction.

Another point, too, must be noticed. The forms of the letters do not date from any one period, but some are much earlier than others. For example, \oplus is not found in inscriptions later than the sixth century, and \angle not later than Olympiad 83, according to Kirchhoff.¹ \boxplus too and $+$ are much earlier than \equiv . These forms have been taken to indicate the early date of the temple,² but, on stylistic grounds, the building is assigned by Dörpfeld³ to a much later date than the presence of these letters, if found in inscriptions, would permit. How it was possible for these forms to be used on the building has not been satisfactorily explained. They may be understood, however, if we regard them not as letters, but as figures. In figures there seems to have been a tendency to retain old forms, as is shown by the use of the lost letters \wp and \Re (ς and τ in Greek papyri⁴) during the later classical period. We should not, therefore, be surprised to find archaic forms used as figures in the last half of the fifth century.

¹ *Studien zur Gesch. des Gr. Alphabets*, 4th ed., p. 94; also Roberts, *Greek Epigraphy*, p. 100, VI.

² Ross, *op. cit.* p. 56; also Adler, *Arch. Zeit.* 1873, p. 109.

³ *Athen. Mitth.* 1884, p. 336. The view is approved by Durm, *Baukunst der Griech.* 2d ed., p. 220. The most recent discussion of this point is by Sauer, in his book entitled *Das sogenannte Theseion und sein plastischer Schmuck*. He thinks (p. 211) that "Das Hephaisteion ist jünger als der Parthenon, also nicht vor den dreissiger Jahren des 5. Jahrhunderts entstanden," and (p. 213) that the building was fully completed at the outbreak of the Peloponnesian War.

⁴ Kenyon, *Palaeography of Greek Papyri*, app. IV, pp. 155 f.

II. THE LIGHTING OF THE THESEUM

I have shown, so far, that the openings in the frames and the lids which covered them were all carefully numbered; that these lids were intended to be moved, and moved only short distances. I now propose to seek an explanation of these openings. No one, I think, has attempted to explain them, up to the present time. But we naturally ask why the architect of the Theseum went to the trouble of having these holes cut in each slab of the marble covering of the pteroma and porches, and then of having lids made for them, all carefully numbered, instead of using solid slabs. Solid slabs were used in some buildings, and it would certainly have saved a great amount of trouble and expense to use them here. It might be suggested that there would be some saving in weight, but this is not the case. The lids are, if anything, a trifle heavier than the amount of marble cut out would be. Or that the openings were intended for ventilation. But in that case so many of them would not have been required. That the architect had some practical object in view is apparent; and that object, I believe, was the introduction of light into the interior of the temple.

The question of the manner in which ancient Greek temples were lighted is one of the oldest problems connected with Greek archaeology. The hypaethral temple of Vitruvius, discussed so vigorously years ago, has long been looked upon with suspicion, and is now generally abandoned. The ingenious proposal of Fergusson for admitting light by means of a clerestory, and various other devices brought forward and advocated at different times, have all failed of acceptance, because no one of them had sufficient evidence to support it. The view generally held to-day is that all exterior light which entered a Greek temple came through the door. This, however, is far from satisfactory. There must have been many days when the light from the door was very inadequate; and on those occasions it would be necessary to resort to the use of lamps, if there were no other method

of introducing light from without. For these and other reasons many archaeologists have felt dissatisfied with the prevailing view, but have been forced to accept it for lack of anything better. The question is not, however, a dead one, as a paper on this subject, read at a meeting of the German Archaeological Institute in Athens, in 1897-98, testifies.¹

Before proceeding to discuss my theory in detail, it will, perhaps, be not out of place to consider briefly the question of the use of lamps in Greek temples. That small lamps were used by the priests for moving about the temple after dark must, of course, be taken for granted. But lamps large enough to light the whole interior were very exceptional. The lamp of Callimachus in the Erechtheum, described by Pausanias (I, 26, 6) and mentioned by Strabo (IX, p. 396) seems to have been such a lamp, but it is quite likely that the chief object in this case was to preserve a perpetual fire, rather than to furnish light.² We know that this lamp was always kept burning, but that during the siege of Athens by Sulla it was allowed to go out for lack of oil.³ The peculiar structure of the Erechtheum might also be adduced as another reason to account for the presence of such a lamp in it, as practically no light could enter the inner compartment through the door.⁴ With this exception, we have no mention in ancient writers of a large lamp among the furnishings of a Greek temple. This is a significant fact, and one which cannot be passed over lightly. It could hardly have been the case if it was customary to light the temple by artificial light.

The method by which, I think, light was introduced into the Theseum was by reflection through the openings in the covering of the pteroma and porches. The light would come from below, by reflection from the stylobate and the ground about the temple, pass up through the openings, and then into the

¹ *Berl. Phil. Woch.* 1898, p. 318; also *Athenaeum*, 1898, p. 317.

² See Frazer, *Pausanias*, vol. II, p. 341, and vol. IV, pp. 441 f.

³ *Plut. Sulla*, 13.

⁴ Dörpfeld, in *Athen. Mitth.* 1897, pp. 159 ff., argues that the lamp of Callimachus was in the old Athena temple.

cella (Fig. 7). The effect would be much the same as in a room with the blinds closed and the slats partially opened. The light which enters, in that case, is a light reflected up from the surrounding objects outside. When it is considered that in the Theseum there were over six hundred of these openings in the covering of the pteroma and porches, each opening about 10 inches square, it will be seen that the

Greeks had a means of introducing a considerable amount of light into the building.

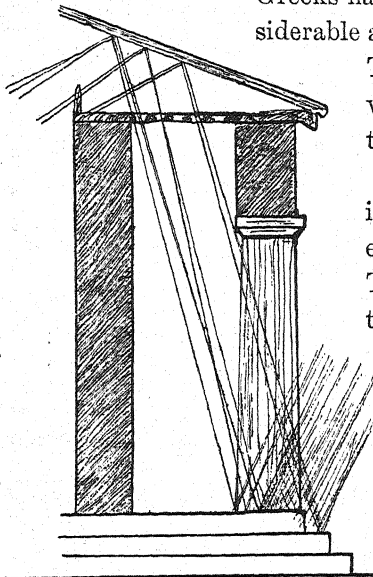


FIGURE 7. — PROPOSED METHOD OF INTRODUCING LIGHT.

This is all the more apparent when it is remembered how intense the light is in Greece.

The lids covering the openings are not heavy, and can be easily removed with one hand. The priest in charge would mount to the top of the pteroma, by means of a ladder, uncover as many of the openings as he wished, and descend. In Sicily, in the so-called Temple of Concord at Girgenti, there is a stone staircase, still existing, leading up to this part of the temple.

A neater way of introducing light into a Greek temple could hardly be imagined, for it is effected without doing violence to any of the constructive principles of the building, or introducing any opening for which we have no archaeological evidence.

The conclusions arrived at presuppose free passage for the light from the top of the pteroma to the interior of the temple. In other words, the cella proper could not have been covered by a second or ornamental roof, as has sometimes been assumed from a passage in Pausanias.¹ In this passage, Pausanias relates

¹ V, 20, 4.

the story, told him by one of the guides at Olympia, that on one occasion, when the roof of the Temple of Hera was being repaired, the body of a hoplite was found (μεταξύ) τῆς τε ἐς εὐπρέπειαν στέγης καὶ τῆς ἀνεχούσης τὸν κέραμον. He goes on to say that the man was one of those who had engaged in a battle against the Lacedaemonians, fought in the Altis, when the men of Elis climbed upon the temples and other high places, and so fought their adversaries; and he imagines that the man, when wounded, crawled into the place where his body was found, and died. The expression τῆς ἐς εὐπρέπειαν στέγης has been taken to mean a covering or second roof over the cella, but this interpretation is not a necessary one. The words might refer perfectly well to the covering of the pteroma. The whole passage, however, is far from clear, as Pausanias neglects to explain how a man fighting on the roof of a temple could get inside and die under the roof. It must be remembered, also, that the Heraeum at Olympia was a very old building, peculiar in many respects, and what might be true of it would not necessarily apply to other temples. It would be quite in accord with Greek ideas to leave the cella without additional covering, and to adorn the inner edge of the cella wall with anthemias and other ornaments. What is more, the lack of a ceiling in a temple near Tegea is proved by a passage in Xenophon's *Hellenica*. He tells how the men of one faction at Tegea take refuge in a temple, and how their opponents climb on top of the temple, break open the roof, and pelt those inside with the tiles until they force them to surrender.¹ This would not have been possible if there were an inner roof covering the cella.

Since, then, we are justified in assuming that in some Greek temples, at any rate, no second covering of the cella existed, there is nothing to hinder the admission of light in the way already described, wherever the ceiling of the pteroma was constructed as in the Theseum at Athens. The door would,

¹ Xen. *Hell.* VI, 5, 9: οἱ δὲ μεταδιώξαντες ἐχθροὶ αὐτῶν ἀναβάντες ἐπὶ τὸν νεῶν καὶ τὴν ὀροφήν διελόντες ἔπαιον ταῖς κεραμίσιν.

of course, always remain one source for the admission of light; but in any temple having a peristyle, or even a portico, this other system of lighting could be employed.

The statement is sometimes made that the cella wall of a Greek temple was raised above the covering of the pteroma as high as the rafters of the roof. What the evidence for this statement is I have been unable to ascertain. As far as the Theseum is concerned, that certainly is not the case. The highest course of the cella wall is level with the covering of the pteroma. What is more, the arrangement of the ancient roof of this building may be seen at a glance by any one who mounts to the present roof. On the inner side of each pediment are three holes for large beams, cut near the three corners. These beams ran across the building from east to west, and rafters extended from the two lower beams to the upper one. The roof tiles were laid upon these rafters.

In this paper I have called attention to the peculiar construction of the roof of the Theseum as it exists to-day. I have tried to show that the architect had a practical object in view in covering the pteroma and porches as he has covered them. Finally, I have tried to make it clear that his object was the admission of light into the building, and that the same system might be employed in any temple having a surrounding colonnade or even a porch.

WILLIAM NICKERSON BATES.

A JONAH MONUMENT IN THE NEW YORK METROPOLITAN MUSEUM

THERE is an interesting monument in the New York Metropolitan Museum of Fine Arts, the true character of which has not been correctly identified. It is displayed on the ground floor of the Museum, immediately to the right of the entrance. It is a piece of sculpture in white marble, about 2 feet long, and 1 foot 8 inches high. It represents a ship containing four men; three of them are naked, and are engaged in letting down another naked man into the jaws of a conventional sea dragon. The dragon is a second time represented casting forth the man upon the shore.

Both the front and back views of this monument are shown in Figs. 1 and 2. It will be seen that the hull of the ship is completely finished in the round, whereas the human figures upon it are executed neither altogether in the round nor merely in relief, but half-way between the two. They are evidently not meant to be seen from behind; and the sail, we must suppose, was only finished in front. The dragon and its victim are, in both cases, executed in relief.

The monument is much damaged; the sail is gone, together with the upper parts of the men on deck and the roof of the cabin on the poop. The lower part of the stone is cut in the shape of a pedestal; but this work is evidently recent, and it therefore affords no indication of the use to which this sculpture was originally put. From the character of the fracture at the back, it appears as if it had formed part of a larger monument, though it is difficult to conjecture what ornamental purpose it may have served.

This monument furnishes an interesting illustration of ancient ship-building. The ship is girded from stem to stern; and at the stern it has, in addition, an under-girding. Such a girding of wood was commonly employed in ancient ship-building, and it cannot be taken to indicate stress of storm and shipwreck such as would require under-girding with cables. The only sign of storm which can be detected is the extreme elevation

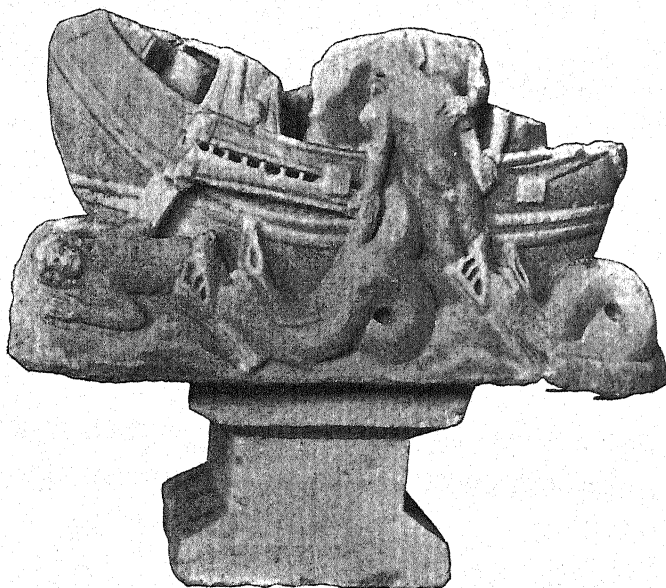


FIGURE 1. — A JONAH MONUMENT IN NEW YORK: FRONT.

of the stern — to judge from the slant of the cabin table. No oars are represented, though a row of oar-locks is carefully executed; a single rudder projects near the stern. The interior of the cabin was carved with curious care; the round table, in the centre, is cut free on all sides, and the difficulty of the execution will be apparent when it is remarked that the opening on the side was originally not so large, but was divided by two thin walls into three narrow slits. The three sailors, as well as the man who is being cast into the sea, are

naked; the helmsman or master, who stands near the stern, was evidently clothed, though nothing is left of him save the lower part of his garment, and that is somewhat confused with the wall of the cabin.

This monument, as it stands in the Museum, is described by a card, as follows: "Votive ship. Graeco-Roman. Found at

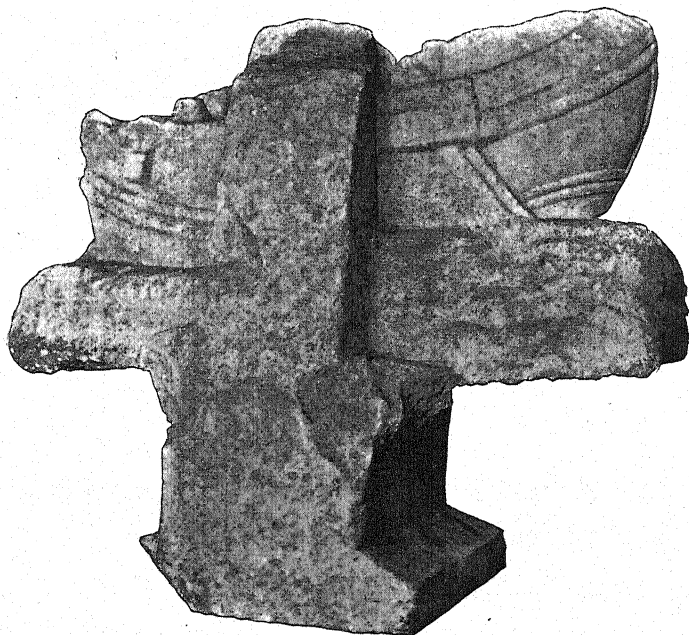


FIGURE 2. — A JONAH MONUMENT IN NEW YORK: REAR.

ancient Tarsus, 1876. Presented to the Museum, 1877, by John Todd Edgar, Late U. S. Consul at Beirût."

The simple designation, "votive ship," seems to express the notion that the monument represents a shipwreck, and was erected out of gratitude for deliverance. If this is the interpretation, it is manifestly far-fetched. It would be a fantastic stretch of symbolism to represent the dangers of the sea in terms of a dragon which swallows a man and casts him forth again upon the land. We have seen that there is no sign of

wreck about the ship, and no very clear indication of storm. It is clear, on the contrary, that the man is intentionally thrown overboard by his comrades.

There is no need to puzzle over the interpretation of this subject, for any one who is at all acquainted with early Christian art will recognize it at once as a representation of the story of Jonah — a theme which was more popular than any other during the third and fourth centuries, and which was always depicted substantially in the same fashion as here. It is found about forty times among the frescos of the Roman catacombs, and it occurs several times upon the sarcophagi of the fourth century, although it was a theme which could not readily be depicted in sculpture.¹

The subject would, no doubt, have been recognized at once, were it not for the strange sea monster which is here found in the place of the familiar whale. The story in the Hebrew calls the creature simply a monster, without designating more particularly its character. In early Christian art the monster was invariably represented by the figure of a fabulous sea dragon with capacious jaws and terrible teeth, usually with fore legs, and always with a serpentine tail writhed in massive convolutions. This creature had its obvious prototype in classic art, — in representations of Perseus and Andromeda, etc. It was first called a whale² in an early Latin version, perhaps in the fourth century; but this interpretation had no influence at all upon art during the whole of the early period, and the non-descript monster held its place unchallenged until the Middle Ages, when it was replaced, not by the whale, but by a great fish.

We have, in this monument, two successive episodes of Jonah's story combined in one picture, — an economy of *mis*

¹ Most of the frescos are yet unpublished, but a number of characteristic examples are to be found among the plates of De Rossi's *Roma Sotterranea* — or, indeed, with any book which deals with early Christian art. The best representation of this theme in sculpture is on a sarcophagus in the Lateran Museum.

² *Cetus* — but even this word may denote an indeterminate monster.

en scene which was common in early Christian art, particularly in Bible miniatures. In the frescos, however, these two episodes were usually treated separately and framed apart. The story was commonly completed by another picture, which represented Jonah lying naked in the shade of the gourd. When, on account of lack of space, the series had to be abbreviated by the omission of any of the scenes, it was usually the scene with the gourd which was retained. This, though the least dramatic of the three subjects, evidently constituted the point of the story. And this apparently strange preference is explained by the fact that the story was depicted in Christian art solely with a symbolic or allegorical interest, as a representation of the resurrection; Jonah, lying naked under the gourd, represented the soul delivered from death and in the enjoyment of the bliss of paradise. Jonah's nakedness under the gourd is significant, because it is not by any means to be derived from the story itself. Jonah's posture under the gourd seems to have been inspired by the representations of Endymion in classic art; his nakedness is evidently meant to signify idyllic repose in paradise; the original prophetic lesson of the gourd is ignored (it is only once represented as withered), and it is taken to represent the heavenly garden. In our monument, Jonah, as he issues from the monster, holds his hands in the early Christian attitude of prayer. This may have been meant to suggest the prayer which he offered in the belly of the monster; but this posture was also characteristic of the *orans*, — the early Christian symbol which represented the soul, after death, supplicating the mercy of God, — and there can be no doubt that this signification was here expressly intended.

To understand the popularity of the pictures of Jonah in early Christian art, and to comprehend the sepulchral symbolism which they expressed, it is necessary to consider this theme in its relation to a whole range of Old and New Testament subjects which were taken as examples of signal deliverance. Several of these subjects are sometimes conjoined in

art, and almost the whole list is several times enumerated in literature. The classical example is a passage in the *Apostolic Constitutions* (Book V, 7): "He who raised Lazarus on the fourth day and the daughter of Jairus and the son of the widow, and rose also himself; who after three days brought forth Jonah living and unharmed from the belly of the whale, and the Three Children from the furnace of Babylon, and Daniel from the mouth of the lions, shall not lack power to raise us also. He who raised the paralytic, and healed him who had the withered hand, and restored the lacking faculty to him who was born blind, the same shall raise us also." The Roman Breviary (in the *Ordo commendationis animae*) contains a still more complete enumeration, couched in the terms of a litany. Each petition is in this form:

"Deliver, O Lord, his soul as thou didst deliver Daniel from the den of lions."

Here, however, Jonah and Lazarus are omitted,—evidently because they were most expressly types of the resurrection, whereas the prayer is for deliverance from bodily death. In the *Acta Sanctorum*, petitions of the same character are several times put in the mouths of martyrs at the moment of death. This reveals a type of thought which was very familiar in the early Church, and it sufficiently explains the predilection for pictures of Jonah.

The story of Jonah was especially appropriated to sepulchral decoration, and we may suppose that our monument formed part of the decoration of a tomb. It may, however, have been a votive monument, erected for the repose of a soul. In either case—whether it served for the adornment of a tomb or of a chapel—it is difficult to conceive just how it may have been employed.

The style of the figures is rude; it is probable that the monument belongs to the fourth century, though it may, conceivably, be as late as the fifth.

The interest of this monument does not consist solely in the fact that it is the only antique representation of the subject in

America. It has a special interest as coming from Tarsus, the birthplace of St. Paul, and as the earliest representation of Jonah which has yet been found in the Orient—so far as my knowledge goes. Beside this, it is one of the few examples we know of early Christian sculpture in the round, and the only one of the sort on which Jonah figures. It is unique in another sense, for it is the only monument of early Christian art which shows so curious a combination of sculpture in the round and in relief. As a minor point, it may be remarked that it is the only case in which Jonah is represented descending feet foremost into the jaws of the monster—though he always comes out head first.

WALTER LOWRIE.

American School
of Classical Studies
in Rome

THE "TRAJAN-RELIEFS" IN THE ROMAN FORUM

SELDOM do excavations on a well-known Roman site bring to light any of its ancient art treasures; still less often is a monument of historical interest found, whose existence no extant literature records. Most ruins when laid bare are best described by the Renaissance epigram, "Quod non fecerunt barbari, fecerunt Barberini." The discovery, therefore, in the Forum, in September, 1872, of two beautiful marble screens or *plutei*, was one of great interest to all students of archaeology. They stand, at present, midway between the Column of Phocas and the remains of the street known as *Ad Janum*. Each screen measures¹ 5.37 m. in length, and 1.75 m. in height; they are 2.95 m. apart, parallel to the front of the Rostra and to each other. Each is composed of several blocks of white marble, carved in relief on either side. These blocks vary greatly in size, the largest ones, however, being always placed at the ends. It appears that the artist took materials already on hand, rather than wait to find single blocks of the requisite size. The joining of the different pieces was doubtless so well done that each *pluteus* appeared to have been cut from a single stone. The inner surfaces of both present the same subject—the three animals offered in the *"suovetaurilia"* (Fig. 1). The *ovis*, *sus*, and *taurus*, each exceptionally well fed and sleek, are adorned

¹ The measurements are given in detail, both because essential in later discussions, and because frequently incorrectly stated. In the description which follows it is to be noted that upon the foundations of rough travertine, upon which the parts still *in situ* were found, blocks of modern marble have been placed in order that the whole might be solidly reset; these latter are not considered in the description.

with the sacrificial fillets, and the first and last named have, in addition, broad girdles, fringed on the ends and embroidered throughout their entire length. Above this design comes the cornice, which runs along both sides and across the ends of the screen. It has first a foliated cyma, then the corona decorated with a double maeander, below which is an egg and dart moulding, a foliated *cyma reversa*, and a pearl astragal. The whole effect is of luxuriant decoration, each member having some form of ornamentation.

The scenes on the outside of the *plutei* are cut in higher relief than the inner ones, and have suffered much more from

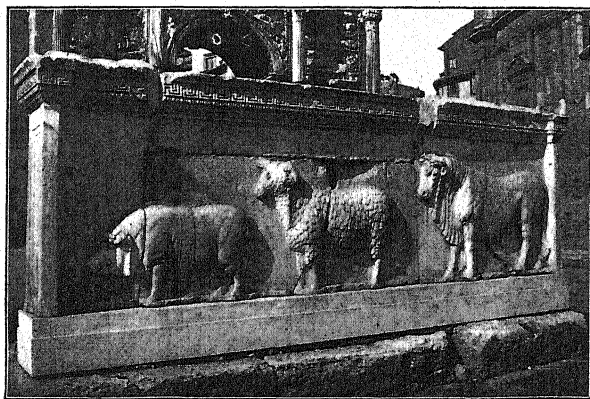


FIGURE 1.—THE SUOVETAURILIA.

the lapse of time or wilful mutilation. On the western screen (Fig. 2) we see in profile a platform, with the adornment of a ship's beak upon its front. Upon it stands a man clad in a toga, attended by six men, at least three of whom hold the rods of the lictor. The group upon the ground before the rostra is composed of thirteen men, wearing short, full togas, with their right hands uplifted in sign of applause. This scene occupies a little over half the screen.

Next to it is a square or rectangular *suggestum*, upon which, on a draped seat, sits the emperor, clad in the usual toga; his foot rests upon a footstool. Before him, upon the same plat-

form, stands a woman; her figure is somewhat obscured in places by mutilations, but there seems to be no doubt that she held on her left arm a child, while with the right hand she led an older one. On the right of this tribunal stand four men dressed in the same fashion as the group before the rostra. Beyond these men is a fig tree, with leaves and fruit, having a cubical base; next to which, on a similar base, is the nude booted figure carrying a wine skin, known as Marsyas.

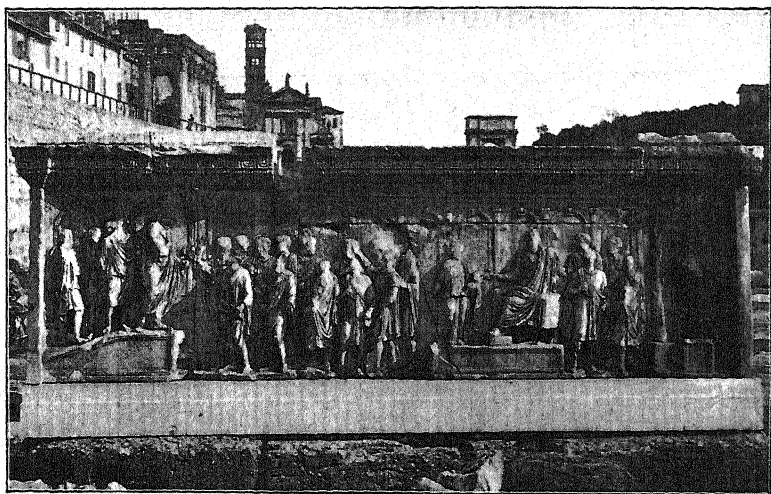


FIGURE 2. — THE TRAJAN-RELIEFS: THE WESTERN SCREEN.

The outside of the eastern screen (Fig. 3) shows, beginning at the left hand, the fig tree and the Marsyas; then nine men, each of whom carries upon his shoulder some object which is evidently to be deposited upon a pile of similar objects toward which all are walking. Behind, and at the right of the pile, stand two other men likewise bearing burdens, and beyond them are four others, who are, judging by their dress, of higher rank than the rest. Beyond these officials the large end block of the *pluteus* is missing; we can see only the front of a platform with fragments of a seated figure. The background of

each of these groups on the outside of the *plutei* is composed of buildings of various styles and sizes.

That much interest was at once aroused by these reliefs is easily understood. Aside from the fact that they were previously unknown, and so offered an unusual field for investigation, it was immediately surmised, from the rostra appearing on each of the outer reliefs, that the scenes were in the Forum,

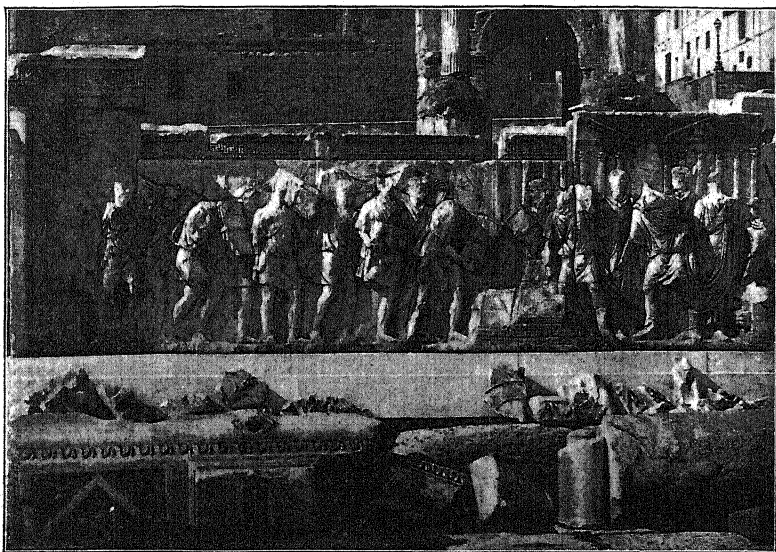


FIGURE 3. — THE TRAJAN-RELIEFS: THE EASTERN SCREEN.

and the buildings forming the background those belonging to this place. The question arose, Will the buildings date themselves, and so give us an idea of the Forum at a definite period, or will the reverse be true?

A full discussion of the screens, therefore, must consider them from the points of view of both the historian and the topographer, and must include a study of their probable use and position.

Historical Interpretation of the Reliefs. — Our knowledge of the buildings and adornments of the Forum under the Repub-

lie makes it most improbable that the screens can belong to that period. Under the Empire, a private citizen would hardly have been distinguished by so unique a monument. The dress, position, and attendants of the main figure in each group, as well as the attitudes of those before him, and the fact that on the eastern screen the figure upon the rostra was evidently seated and clad in a toga, make it seem certain that we have here the commemoration of some notable act on the part of an emperor. Critics have suggested that he was either Domitian, Trajan, or Hadrian, because in the life of each of these there occur certain events which these scenes might be considered to portray. The arguments in favor of each interpretation will, therefore, be reviewed.

Visconti¹ appears as the chief exponent of the view that two scenes from the life of Domitian are here represented. That emperor is known to have promulgated, among other acts, one against *eviratio*,² and one abolishing the *libelli famosi*.³ The promulgation of the first edict might well have taken place from the Rostra, especially as Suetonius says :³ "ius diligenter et industrie dixit, plerumque et in foro pro tribunali, extra ordinem." Moreover, according to Visconti, some of the men in the groups on the western screen wear the *pallium*, but most of them wear the *paenula*, which is particularly the garment of slaves or of those who have no right to the toga. The curious object carried in the hand of one of those in the front rank (similar ones may have been held by others) he takes to be a basket, which would indicate the servile condition of the one by whom it is carried.

The group upon the square tribunal is considered by him to be without doubt a personification of *Fecunditas*, as she appears upon the coins of the younger Faustina⁴ and of Lucilla,⁵ thus

¹ Visconti, *Deux actes de Domitien*.

² Suet. *Dom.* 7 ; Stat. *Silv.* 3, 4, 73-77 ; 4, 3, 13-15 ; Mart. 9, 6.

³ Suet. *Dom.* 8.

⁴ Cohen, *Description historique des Médailles impériales romaines* (1883), III, p. 143, 93-105.

⁵ *Ibid.* III, p. 216, 20-26.

suggesting the beneficent effect of the edict which the whole commemorates.

Turning now to the eastern screen, we are told that this is a representation of the suppression of the *libelli famosi* mentioned by Suetonius.¹ The man upon the rostra is probably the emperor, the one in the toga next to the rostra must be some magistrate, and the one wearing the *cothurni* either a centurion or a tribune charged with the duty of applying the torch. This cremation of condemned articles took place according to Livy² "*in comitio*," which our critic considers to be the same as "*in foro*." A coin of Hadrian,³ commemorating the remission of old dues, represents the emperor in somewhat the same position applying the torch to a mass of papers.

These are the arguments from history which assist Visconti in deciding that it is Domitian whose acts are here commemorated. The reliefs upon the inner surfaces he regards as particularly appropriate, because they would call to mind the fact that the edicts were promulgated by Domitian chiefly in his character as censor, for it was by this official that the solemn sacrifice of the *suovetaurilia* was usually offered.

Taking up the question of date as determined by art, Visconti points out that each member of the moulding has its appropriate decoration, and that the simple, unadorned members found in the days when taste in such matters was purer, are lacking. The height of bad taste in cornices was reached during the reign of Domitian, as may be seen by a comparison of those of the Forum Transitorium with those of the Arch of Titus. Later, Trajan's good taste did much to correct this degeneration, and the Forum of Trajan, the temple of Venus and Rome, and the temple of Antoninus and Faustina show how great was the change from Domitian's time, for they present a style as good as that of the Augustan age.

¹ *Dom.* 8.

² Livy, 40, 29. It may be noted that Tac. *Agr.* 2, says, "*monumenta clarissimorum ingeniorum in comitio ac foro urerentur.*"

³ Cohen, II, p. 209, 1212.

The cutting of the reliefs, in Visconti's opinion, points to the first century of the Empire; the movements of the figures are easy and natural, the folds of the drapery are in good style, the composition of the whole is simple and uniform, showing but two planes of relief. The high polish so much used in the time of Hadrian is also lacking. In addition to these arguments from history and art, it must be remembered that Domitian's reign was signalized by much rebuilding, particularly in the Forum and upon the Capitol.¹

These facts and inferences leave no doubt in the mind of this critic that the reliefs should be assigned to the reign of Domitian.

Brizio,² who has supported the theory that certain acts of Hadrian are perpetuated upon these *plutei*, argues as follows: "The acts represented belong, without doubt, to one man, who, in this period, can have been none other than the emperor. The enthusiasm with which his words are received indicates that some largess or work of beneficence is being promised. The group on the *suggestum* in the western screen is to be considered as monumental and allegorical, because (a) the *suggestum* lacks any indication of steps, which makes it necessarily a pedestal; (b) the woman is quite Greek in her dress, and stands upon the same level as the emperor's throne. Therefore, although this group has a connection with the other, it does not cease to be allegorical. If the first group is applauding some generous act of the emperor, this one must personify liberality or a kindred virtue. Now we know that under the Empire it became common to represent the emperor in the guise of some virtue or in connection with a personification thereof. This was especially true of designs on coins, of which several exist very like the group in question.³ It also bears a marked similarity to the design on a coin of Trajan which records the *ALIMENTA ITALIAE*.⁴ As Hadrian increased this

¹ Jordan, *Topographie der Stadt Rom im Alterthum* (1878), II, p. 29.

² *Ann. Inst.* 1872, p. 309.

³ Cohen, II, p. 184, 949.

⁴ Cohen, II, p. 19, 15.

donation,¹ the significance of the group would be easily understood."

The scene on the eastern screen Brizio compares with certain coins of Hadrian, representing a lictor burning a mass of papers.² These bronzes commemorate an act of Hadrian in 118 A.D., when he caused the *syngrapha* representing the debts owed to the fiscus to be solemnly burned. This act is recorded by Hadrian's biographer¹ and also in an inscription,³ as well as on the coins mentioned.²

There is one difficulty in the way of this interpretation, which, however, does not seem to Brizio insurmountable. Spartianus, speaking of the burning of the accounts, says expressly that the act in question took place in the Forum of Trajan. Aurelian, however, burned accounts later in the same Forum. Our critic, therefore, thinks it likely that Spartianus confused the two events, and so spoke of Hadrian's action as occurring in the place made famous by the cremation under Aurelian.

He feels that all difficulties would be solved could we see the head or face of the emperor. From the fragment of head still remaining on the seated figure of the emperor, it seems likely that it was bearded. This would at once set the date as not earlier than Hadrian's time, since he was the first emperor to wear a beard. This inference is further confirmed by the fact that all of the lictors and some of the citizens have beards.

In considering these reliefs from an artistic point of view, Brizio finds them much better than the sculptures on the Arch of Claudius, or on that of Titus. While on the latter the figures are confused and show no attention to the laws of grouping, we have here a harmonious arrangement both of individuals and of the whole. It is also noticeable that they so far lack the quality of statuesqueness found in the figures on the Arch of Titus as to seem to have been executed under the influence of an entirely different and much more artistic principle. This is just what would be expected in Hadrian's time; for, as a

¹ Spart. *Had.* 7.

² Cohen, II, p. 208, 1210-1213.

³ *C.I.L.* 6, 967.

result largely of his influence, the art of sculpture underwent a strong revival along Greek lines during his reign. Both art and history are thus seen by him to agree in assigning these reliefs to the time of Hadrian.

A large majority of the scholars who have studied these *plutei* agree in referring them to Trajan, for reasons which may briefly be stated as follows:

One of the most popular acts of Trajan's reign, and one which was commemorated on an arch as well as by coins and inscriptions, was the enlargement (amounting practically to the founding) of the system of alimentionation begun on a small scale by Nerva. The large number of coins¹ which refer to this system of relief, as well as the fact that it was mentioned on a triumphal arch, show the great interest which it had for the people. Another almost equally popular measure was the remission in certain cases of the tax on inheritances (*vicesima hereditatium*).² (This would be represented by the burning of the accounts as shown on the eastern screen.) We have thus two acts of this emperor which might be represented by these reliefs. From the point of view of art it is argued, *e.g.* by Henzen,³ that in the abundance of detail, in the use of "three planes of relief,"⁴ in the tendency to particularize, and in the vivacity of the figures, we have elements found elsewhere on monuments which are indubitably of Trajan's time. To this must be added the further confirmation given by the similarity of arrangement of the dress, beard, and hair of the different figures to that on reliefs known to be of this period, which proves that the screens cannot be assigned to an earlier date. Any one who would attribute them to Hadrian, must assign them, as Brizio⁵ did, to the first years of his reign when the artists of Trajan's day were still living.

There are thus three theories as to the historical import of the reliefs, referring to the acts of three different emperors.

¹ Cohen, II, pp. 18, 19; 7-19.

² Plin. *Paneg.* 40 (ed. Keil).

³ *Bull. Inst.* 1872, p. 276.

⁴ Cf. statement on p. 64.

⁵ *Ann. Inst.* 1872, p. 309.

It is necessary, in the first place, to examine in detail some of the premises upon which these conclusions are based.

Almost every one who has written about these groups has discussed the question, Have the men beards? It has been said that they were bearded, and that they were not; and that if they were, the reliefs must date from Hadrian's time and not from Trajan's. A careful study of the faces, particularly of those on the western screen, on which the heads are less mutilated, shows that the full clean outline of the chin can be traced on many of the figures, and that it is hardly possible that these were bearded. Certain others it is equally clear were bearded; for example, the lictor who stands next to the last man on the rostra. The question, then, is whether the presence of some bearded men proves the date to be as late as that of Hadrian's reign.

In Cicero's time and after (possibly also before), many men wore beards, and only men over forty were clean shaven.¹ Spartianus² speaks of Hadrian as wearing a full beard (*promissa barba*) to cover scars upon his face. Dio Cassius³ also speaks of him as the "first" to wear a beard. He is not the first emperor whose bust shows him to have allowed the hair upon his face to grow, but he is the first one represented as wearing a full beard. Evidently, therefore, Hadrian did not introduce beards, but only the custom of wearing them long and full. On Trajan's Column there is a representation of the emperor sacrificing at an altar; many of the men who appear in the scene are bearded, but by no means all of them.⁴ Again we find a scene wherein the seated emperor is surrounded by attendants, some of whom are bearded.⁵ In still another group, Trajan is standing with a roll in his hand, addressing his men, and again we see both bearded and beardless men among those who stand before him.⁶ On the rectangu-

¹ Marquardt, *Privatleben der Römer*, p. 600; Cic. *Cat.* 2, 10.

² *Had.* 26.

³ 68, 15.

⁴ Cichorius, *Die Reliefs der Traianssäule*, Taf. xxxviii, xxxix.

⁵ *Ibid.* Taf. liv.

⁶ *Ibid.* Taf. lvi.

lar reliefs of the Arch of Constantine we find that the men accompanying Trajan are bearded, even when he and they are clad in the toga. The arch at Beneventum shows in the same group lictors and *comites* both as bearded and beardless.

It would seem a fair deduction from these examples that in Trajan's time one might expect to find among any group of men a number who would be represented as wearing beards. That some of those on the reliefs in question have beards, is not, therefore, a proof that the work dates from Hadrian's time.

Of all the possible subjects which have been suggested, the two edicts of Domitian are the least probable. They are not, as far as at present appears, recorded on any monument, nor are there coins¹ which commemorate them. They passed apparently unapplauded and unnoticed by the general public; it is to literature, and especially to poetry, that we owe our knowledge of them.

Hadrian's claim to recognition lies in the fact that he burned the *syngrapha*; but this is expressly said to have taken place in the Forum of Trajan. While this act is represented on one of his coins² in a manner which would suggest the group upon the screen, it must be remembered that similar scenes would be represented in similar ways; and it is quite as possible that the design upon the coin was suggested by the monument, especially since we know of many famous statues which were thus copied, as to suppose that it was the original of the group, or contemporaneous therewith. Furthermore, the system of alimentation, as increased by him, had no special mention upon monuments of any kind, and is not mentioned upon coins;¹ nor does a study of works of art known to date from his time yield any evidence in favor of assigning the *plutei* to his reign.

On coins of Hadrian, two designs are found similar to the group on the western screen. One, on the reverse of a bronze which bears the legend,

LIBERTAS RESTITVTA. PONT. MAX. TR. POT. COS. III. S. C.

¹ This statement is based upon the coins listed in Cohen.

² Cohen, II, p. 184, 949.

represents Hadrian seated on a throne extending his hand to a woman, who holds on her left arm a child while with her right hand she presents an older one; she rests one foot upon a footstool, but another coin is known to exist which is the exact duplicate of this, only that she stands with both feet upon the ground, as does the figure on the screen. Another bronze of the same emperor shows a lictor applying a torch to a mass of papers, while the men standing before him applaud with uplifted hands.¹ On a bronze, bearing the legend, JVDAEA, S. C., the emperor is standing and extending his hand over two children who carry palms; while opposite, near an altar, is a woman.² On still another bronze the attitude of the seated emperor holding a sceptre in his left hand, and a branch in the other, is very similar to that of the figure on the tribunal.³

Two coins of Antoninus Pius, one with the legend,⁴ LIBERALITAS AVG. II, and the other with,⁵ PIETATI AVG. COS. IIII, show respectively the seated emperor, beside whom stands Liberalitas, pouring money from her horn into the hands of a man who stands before the emperor, and a woman holding a globe in her right hand and a child upon her left arm, while two other children stand beside her. Reference has already been made⁶ to the coins of the younger Faustina and Lucilla, which show Fecunditas typified in a similar way, while Parthia or Germania is represented on a coin of Augustus as presenting a child to the emperor,⁷ and Tiberius on one of his bronzes is seated in precisely the same attitude as the emperor upon the tribunal.⁸ It is clear then that while the designs on the coins of Hadrian bear a great resemblance to these reliefs, certain ones of other emperors likewise resemble them in many respects, and tend to prove that these types of a woman with a child, and the seated emperor, were not uncommon.

There are a number of different coins all bearing the legend,

¹ Cohen, II, p. 209, 1212.

² *Ibid.* II, p. 179, 871.

³ Cohen, II, p. 220, 1386.

⁴ *Ibid.* II, p. 317, 483.

⁵ Cohen, II, p. 331, 624.

⁶ p. 62.

⁷ Cohen, I, p. 87, 174.

⁸ *Ibid.* p. 189, 3.

ALIM. ITAL.,¹ commemorating the system of alimentation carried out under Trajan. (It should be remembered that the system as begun by Nerva is not mentioned on any of his coins.²)

There is therefore reason for attributing these reliefs to Trajan, on the ground of the abundant recognition which the system of alimentation received. It is also established that the group upon the tribunal is not unusual in arrangement or symbolism, and is capable of reference to some such beneficent act of the emperor as the establishment of this system.

One point frequently urged against the claim that these scenes pertain to Trajan's reign, is the presence of the three animals of the *suovetaurilia*, which is said to prove that the reliefs date from Domitian's time and not later, because he was the last to offer this sacrifice as censor. But the *suovetaurilia*, while peculiar to the office of censor, does not, by its presence, necessarily indicate a lustration following a census. Tacitus records its being offered at the rebuilding of the Capitoline temple,³ and when the army crossed the Euphrates.⁴ The Arch of Constantine shows Trajan clad in a toga, sacrificing these animals, and on the great column in his forum he is represented as about to offer this sacrifice.⁵ A base, now in the Forum near the Arch of Septimius Severus, showing in relief the *sus*, *ovis*, and *taurus*, and, as the inscription proves, set up to commemorate some *decennalia*,⁶ is universally dated much later than the *plutei*, being assigned to the reign of Diocletian,⁷ or Constantius and Maximianus.⁶ The presence of these animals, therefore, does not prove that the screens must date from the reign of Domitian or earlier; they may belong to the time of Trajan, so far as historical probability is concerned.

We see, therefore, that when Trajan's acts are considered, a very different state of affairs is found from that which exists in

¹ Cohen, II, pp. 18, 19; 7-19.

² This statement is based upon the coins listed in Cohen.

³ *Hist.* 4, 53.

⁶ *C. I. L.* 6, 1203.

⁴ *Ann.* 6, 43.

⁷ *Röm. Mitth.* 1893, p. 281.

⁵ Cichorius, *Taf.* xxxviii.

the case of the other emperors. There is nothing in the line of documentary evidence against his having made the proclamation in regard to the system of alimentation in the Roman Forum. Public cremation of condemned articles had taken place here, so that it is most improbable that Trajan's Forum, even if completed at the time when the *plutei* were set up, would have been chosen as the place for this solemn destruction. The costumes accord with those depicted upon monuments of his time, and the *suovetaurilia* is a sacrifice which he is represented more than once as offering. The system of alimentation was commemorated by an arch and by coins and inscriptions, in a way that shows its immense popularity and makes it more than probable that some lasting memorial thereof would be erected. Finally, the workmanship of the monument and the fact that it is in relief, point at once to a reign wherein good art and a fondness for relief work were prevalent.

Topographical Interpretation of the Reliefs. — The historical or artistic features of the monument by no means monopolize the attention of the student. The Roman Forum has always been a favorite field of the topographer, and the prospect of a possible solution of some of the many disputed points in connection with the buildings in and around it aroused every one to an earnest study of the buildings which form the background for the two principal groups. The most important of the theories thus far advanced will therefore be presented and their probability considered.

Nichols,¹ in discussing the topography of the Forum as indicated by the reliefs, calls attention to the fact that on each screen we find the tree at the left of the statue, while the rostra changes sides. From this he infers that the scenes are continuous, as follows (beginning at the right hand on the eastern screen): the temple of Vespasian, that of Saturn, an arch of the loggia of the Tabularium, and the Basilica Julia, which is continued on the western screen, on which we have the Basilica Julia, a space indicating the Castor temple (which

¹ Nichols, *The Roman Forum*, p. 67.

is not shown because hidden from the spectator by other monuments), the temple of Julius Caesar, and the Arch of Augustus. The position of the Rostra after its removal from its old site¹ he thinks has never been ascertained, "except in so far as the sculptures before us enable us to do so."

According to Middleton² the following buildings and arches are represented: on the western screen (beginning at the left), the Arch of Augustus, the temple of Castor and Pollux, and the Basilica Julia; on the eastern screen, the Saturn temple, an arch of the Tabularium, and the Vespasian temple.

Visconti,³ deeming the reliefs of themselves "sufficiently clear," gives the following explanation of the buildings represented. On the western screen the emperor is evidently speaking from the rostra of the Capitol. The arch directly behind him must be one of those leading to the Forum, and it is possible to take it as one which passed over the present Via Marforio. Beyond the vacant space which intervenes is the Curia Hostilia (or Julia). The vacant space to the right of this is that of some open way corresponding to the present Via Bonella; beyond it is the easily recognizable Basilica Aemilia. The *suggestum* which is before it must be that of the praetor, situated toward the short side of the Forum near the Arch of Fabius. The vacant space following is evidently that of the area of the Comitium because of the presence of the Ficus Ruminalis, which is a certain indication thereof; moreover, the statue of Marsyas is also here near the Rostra Julia and the tribunal of the praetor.⁴ This position of the Comitium, which we know was once before the Curia, he explains upon the supposition that it was transferred under the Empire to the lower end of the Forum.

On the eastern screen the rostra is turned in the same way (*i.e.* toward the lower end of the Forum); so we have still the

¹ Dio Cassius, XLIII, 49.

² Middleton, *Remains of Ancient Rome*, I, p. 346.

³ Visconti, *Deux actes de Domitien*.

⁴ Senec. *de Benef.* 6, 32; Schol. Hor. *Sat.* 1, 6, 120.

rostra of the Capitoline. The temples of Vespasian and Saturn must be the ones next given, while the arch between them serves to indicate in the most positive way a road; possibly it is the Porta Pandana, which is known to have spanned a road leading to the Capitol. Next to the Saturn temple stands the Basilica Julia, beyond which is the open space indicating the Vicus Tuscus, and the fig tree and Marsyas complete the circuit. But this time the statue precedes the tree because "it is natural that the person who looks at them the long way of the Forum would see them in a reverse position from the one who looks at them from the side which is opposite to them."

"The spectator, who, standing in the middle of the Forum, facing the Rostra, should direct his eyes from left to right would, after surveying the upper end and side of the same, find at the lower end the fig tree and the Marsyas statue; if now he begins with them, and takes another survey from left to right, he will see the other long side of the Forum and return inevitably to the Rostra, with which he began." This is the explanation which Brizio¹ gives of the topography, and he would name the buildings as follows: The arch behind the rostra (on Fig. 2) is either a triumphal one or a Janus, for these two forms are much alike in reliefs. (The latter is perhaps the more probable explanation.) Next to it is the Senaculum of Domitian, then the Basilica Aemilia. On Fig. 3 (beginning at the left) the Basilica Julia and the Saturn and Concord temples are easily recognized. The appearance of the Basilica Julia here is very different from that on the Arch of Constantine, which may be due to repairs made upon it at a later period.

In Marucchi's *Foro Romano*, pp. 104-108, the eastern screen is said to show the temples of Vespasian and Saturn, and the Basilica Julia. As the Marsyas and fig tree appear on each side, only in reversed positions, they must be used as hyphens and indicate that the scenes are continuous; and this interpretation is confirmed by the fact that the basilica arches on the

¹ *Ann. Inst.* 1872, p. 317.

two screens are "identical in form and dimension." We have therefore on the western screen the Basilica Julia, the Vicus Tuscus (indicated by the vacant space), the Castor temple, the Arch of Augustus, and the rostra of the Aedes Divi Juli.

Jordan's explanation¹ may be briefly stated thus: On the eastern screen, beginning at the right, the Vespasian temple, an arch (either that of Tiberius or an arch of the Tabularium), the Saturn temple, the Basilica Julia; on the western screen an unknown arch, the Curia, a street (shown by the blank), and the Basilica Aemilia.

Gardthausen² has supported the view that we must orient the *plutei* from north to south, and trace the buildings accordingly. This theory seems largely based on two premises: first, that the screens are *in situ*; secondly, that the Basilica Aemilia, being the most beautiful building in Rome, could not have been represented merely by a few pilasters and columns. It may be answered that the travertine foundations are utterly unworthy of the *plutei*, and even if veneered with marble are a most unlikely base. As for the second reason adduced, it is hard to see how doubling the number of pilasters and columns makes a more adequate representation of the most beautiful basilica, nor why this same argument would not compel one to consider the representations of the temples as equally inadequate. This view therefore has not been considered in the final summary.

In comparing the various theories which have been thus briefly stated, it will be seen that our ideas as to what buildings are represented will depend, on the one hand, upon the view we adopt as to the meaning and use of the Marsyas and the fig tree; and, on the other, upon what we consider to have been the artist's conception of his background. A study of temples, arches, and other buildings, as represented upon coins and reliefs, leads to the conclusion that, while one can never look for absolute accuracy in such representations, nor even for correctness of detail (such as the number of columns of a

¹ Jordan, I, 2, p. 224.

² *Hermes*, 1874, p. 129.

temple), one may not assume, without good proof, that the artist has taken unusual topographical liberties with anything but his perspective. The Arch of Augustus, as shown on coins, is a good example of the freedom thus exercised. Recent excavations have proved that this was a triple arch like that of Septimius Severus. On coins it appears as a single, double, or triple arch, but always surmounted by a quadriga.¹

On the Haterian reliefs² (which date from the third century of this era) we find a series of buildings indicated as being upon the Sacra Via, one of which is entirely unknown to us, while the remainder are treated in a conventional and, at the same time, a free manner. For example, the temple of Venus and Rome is represented simply by the goddess, who is sitting under the Arch of Titus, her own temple not being shown. Only two stories are given to the Colosseum, while the temple on the right hand, has, as often on coins, its statue not within the *cella*, but in full view. The artist evidently felt himself justified in conventionalizing his representations, but not in adding edifices which were out of sight or in omitting a prominent building. Remembering, then, that one is not justified in hasty assumptions as to the artist's having made arbitrary changes, nor yet in requiring photographic accuracy, we may now proceed to consider the topography of the reliefs.

As two objects appear on both *plutei*, — namely, the fig tree and the Marsyas, — they have naturally constituted the point around which the topographical questions centre. It is therefore necessary to learn all we can about them at the outset.

On the familiar passage in Horace,³

"Obeundus Marsya, qui se
vultum ferre negat Noviorum posse minoris,"

the Commentator Cruquianus remarks: "Marsyas statua erat pro rostris ad quam solebant convenire causidici;" Acro says:

¹ Cohen, I, p. 82, 123, 229, 230, 231, 235, 544.

² Helbig, *Führer durch die öffentl. Samml. klass. Alterth. in Rom*, I, pp. 515-520.

³ *Sat.* I, 6, 120.

"Marsyas statua erat pro rostris." Martial¹ gives a still more vague indication of its position in the lines,

"Fora litibus omnia fervent;
Ipse potest fieri Marsya causicidius."

Seneca,² speaking of Julia, daughter of Augustus, implies that the statue stood near the Rostra: "Forum ipsum ac rostra ex quibus pater legem de adulteriis tulerat, filiae in stupra placuisse, quotidianum ad Marsyam concursum." In the elder Pliny reference is made to it in two connections: "P. Munatius cum demptam Marsyae coronam capiti suo imposuisset atque ob id eum duci in vinculi triumviri iussissent, appellavit tribunos plebis. . . . Apud nos exemplum licentiae huius non est aliud quam filia divi Augusti, cuius luxuria noctibus coronatum Marsyam litterae illius dei gemunt."³

It would seem, then, from the testimony of these ancient writers that such a statue stood in the Forum, and presumably near the Rostra. The meaning of this Marsyas or Silenus, when standing, as was usual in Italian cities, in the marketplace, is uncertain. Servius, commenting on the word *Lyaeo*, says:⁴ "Lyaeo, qui, ut supra diximus, apte in urbibus libertatis (ubertatis?) est deus. Unde etiam Marsyas eius minister in civitatibus in foro positus libertatis (ubertatis?), qui erecta manu testatur nihil urbi deesse." It was probably originally connected with the idea of fulness or wealth (*ubertas*) before it came to be considered a sign of the city's freedom. This latter use seems to have developed in the seventh⁵ century of the city. One of the earliest representations of the Marsyas known to us is on the reverse of a denarius of the gens Marcia (B.C. 84),⁶ and agrees with the description given by ancient authorities. The figure has a tail, and is nude except for his boots; his right hand is uplifted, while the left grasps

¹ 2, 64, 8.

³ *N.H.* 21, 8-9.

² *De Benef.* 6, 32.

⁴ *Aen.* 4, 58.

⁵ Baumeister, *Denkmäler*, art. "Marsyas"; Jordan, *Marsyas auf dem Forum*.

⁶ Babelon, *Monnaies de la République romaine*, II, p. 195, 42.

a wine skin. Certain coins of cities in Asia Minor show a similar design, as used much later (ninth century of the city).¹

In this use in the Forum the figure seems to have no connection with the story of the contest between Apollo and Marsyas, but to be a Silenus who carries a wine skin, not a victim being flayed.

This leads to a consideration of the tree which in both scenes stands next to the Marsyas.

The Ficus Ruminalis, under which Romulus and Remus had been found, had been, according to Roman tradition, transferred from its original site to a place "in foro ipso ac comitio"² by the augur Attius Navius. Tacitus mentions it as "Ruminalem arborem in comitio."³ From the reverence with which it was regarded, and on account of its position, it became one of the natural landmarks of the Forum, so that its presence in any scene would indicate clearly that the place of action was the Forum.

We have thus, as the most prominent features of these scenes, two of the oldest and most sacred landmarks of the Forum and Comitium, namely, the Marsyas and the Ficus Ruminalis. Each is depicted with a cubical base, thus indicating its symbolical meaning. The suggestion of Hülsen⁴ that, as on the western screen the cubical figure upon which the tree appears to stand has incised lines on both of the sides which are shown, we must therefore consider it not a base but a square enclosure, does not seem warranted by the facts; for we find these same lines shown on both bases of the eastern screen, and on one side of the Marsyas base on the western screen. Its absence on the other side appears to be a concession to the obvious difficulty of cutting lines upon that particular part. The two bases may, therefore, be taken as part of the conventionality of the group, simply indicating its allegorical use.

Hence, it may be safely assumed that the artist, wishing to delineate a scene in the Forum, took, as a means of indicating

¹ Cohen, IV, p. 283, 278.

² Pliny, *N.H.* 15, 77.

³ *Ann.* 13, 58.

⁴ *Röm. Mitth.* 1892, p. 287.

this place, three of the most prominent objects therein,—the Rostra, the fig tree, and the Marsyas; and, desiring an arrangement of each scene which should be harmonious and yet not an exact repetition of the other, he placed the group at one end and the Rostra at the other, varying the position of the two objects which compose the group so as to avoid a sameness, as needless as it would have been inartistic. On the eastern screen we see a further proof of this motive for change in the composition of the group, in the way in which the tunic of the last man blows back against the statue, while on the opposite side we have the quiet harmony of the long lines of the drapery of the standing figure and of the tree by which he stands. The decorative effect which is to be produced by the fig tree is further shown by the way in which it is used in each case to cover by its leaves and fruit as large as possible a portion of the otherwise blank space, which would have formed an unpleasant contrast to the rest of the background, which is fully occupied by buildings.

Since the Marsyas and the fig tree have only a symbolical and decorative but not strictly topographical purpose, it is possible to discuss more intelligently the question as to what buildings in the Forum are represented. The buildings which suggest themselves as easiest of identification are those represented on each screen by a series of arches and pilasters or columns. Various scholars¹ have argued that these must be representations of the same building, especially as the Marsyas and the fig tree appear at the end of each. But, as we have concluded, the latter are not used with any strictly topographical meaning. Moreover, it seems unlikely that the artist would have drawn two scenes which are so inharmonious when placed together, as taking place before the same building. It is also to be noted that the two differ much in drawing. Only one fragment remains which shows the top of the arches of the basilica on the eastern screen, but it is sufficient to give the

¹ *E.g.* Middleton, *Remains of Ancient Rome*, I, pp. 346-347; Marucchi, *Foro Romano*, pp. 105-107.

diameter and height of the arch, which differ respectively by 3 cm. and 3.5 cm. from those of the western screen.

Having, then, two basilicas, we find it easy to identify them as the Basilica Julia and the Basilica Aemilia. That only one story of each is given, while we have reason to believe that they exceeded that height, is due to the license employed by all artists when adapting buildings to designs for coins or architectural spaces. As has already been stated,¹ on the Haterian reliefs the Colosseum is reduced in height as well as distorted in its proportions. On the western screen the ship's beak adorning the front of the platform from which the emperor is addressing the people indicates at once that we have here the rostra of the Forum Romanum. This we know to have been changed in Caesar's time to a place at the foot of the Capitol, now happily identified. Although at times the steps of the Castor temple and the platform before the Aedes Divi Iuli² were used as rostra, this one, even though transferred from its ancient position, retained its place in the hearts and language of the people as "the Rostra." Its appearance upon the Arch of Constantine is evidence of its long-continued importance. In this position at the foot of the Capitol, it was probably entered from the rear³ by a sloping ascent, the terrace rendering stairs unnecessary.

If the emperor is standing upon the Rostra, the buildings represented as upon his left hand must be the Curia and the Basilica Aemilia. This agrees with all that is known as to the relative positions of the two buildings, and the space between them would naturally indicate the street separating the two.

It has been suggested that we have here the Castor temple, as the first building. But if we accept the platform with the ship's beak as the Rostra, this would be topographically impossible; moreover, it is represented as having steps in the front, which we now know was not the case with this temple.⁴ For similar reasons, it cannot be accepted as the Senaculum, for the

¹ p. 75.

² Jordan, I, 2, p. 227.

³ Richter, *Jb. Arch. Inst.* 1889, p. 15.

⁴ Jordan, I, 2, p. 375.

latest studies connected with the Forum and Comitium have proven that the Curia was next to the Basilica Aemilia.¹

This shows that the arch which closes the scene on the left is probably one over the Clivus Argentarius, the present Via Marforio. Whether it was a Janus or some triumphal arch cannot be definitely proven by any obtainable data. It is evident from such reliefs as that of the Haterii that arches existed and were well known, which no extant author has mentioned.

Having decided that the long building on the eastern screen is the Basilica Julia, it remains to identify the two temples with the arch between them. But before beginning, it must be noticed that this *pluteus* is incomplete and has lost a portion 0.98 m. in length. Comparing the measurements of the rostra on the western screen, we find that the missing portion was amply large to have shown a similar one. This fact, together with the part still visible, suggests a solution of the problem.

The temple with the Ionic columns next to the Basilica Julia is the Saturn temple, and the one with the Corinthian capitals is the temple of Vespasian. The missing fragment would not be more than long enough for depicting the Concord temple, which was so much broader than either of the other two. The screens then give us the two long sides of the Forum, beginning each time with the Rostra. To consider the last temple now visible on the *pluteus* as the Concord temple would leave no building which could have filled the missing portion of the scene behind the Rostra, and require us to imagine that so prominent and beautiful a building as that of the Vespasian temple was purposely omitted, an illogical and unnecessary conclusion.

The arch between the two temples remains to be identified. It has been called an arch of the Tabularium, the Porta Pandana, and an arch of Tiberius. The latter was erected "propter aedem Saturni";² Jordan³ places it, therefore, at the west end

¹ *Röm. Mitth.* 1893, p. 278; Lanciani, *Ruins and Excavations of Ancient Rome*, p. 264.

² *Tac. Ann.* 2, 41.

³ Jordan, I, 2, p. 211.

of the Basilica Julia, over the Sacra Via, where in 1849 traces of some such construction were found.¹ From the location given by Tacitus it seems clear that the arch must have been either at this point, or else between the Basilica Julia and the Saturn temple, over the Vicus Jugarius. In either position it could not have been represented as between the Saturn and Vespasian temples.

The Porta Pandana or Saturnia Porta,² if it was "post aedem Saturni," as Solinus says,³ would hardly be represented in this position. And if it was, as some authorities think, a gateway on or near the Tarpeian rock,⁴ it would have been quite out of sight.

There remain, therefore, two possibilities: either an arch of the Tabularium is represented or an unknown one. Its simple form agrees with all that we know of the architecture of the Tabularium, while the way in which it is drawn seems to indicate clearly that it was back of the Vespasian temple. As none of the arches suggested can be proven to have stood here, it is most probable that the Tabularium is the building indicated.

The background is thus all accounted for, and the arrangement agrees in general with that of the buildings in regard to which we have any definite knowledge. There are many difficulties in the way of a hard and fast decision in regard to that which may always remain a disputed point; but in the present state of our knowledge this seems the most probable solution of the topographical problem.

Original Site and Use of the Screens. — The questions of the original position and of the use of the *plutei* are so closely allied as to be practically one. It may frankly be confessed that the two seem incapable of any satisfactory solution. There is no building or entrance in existence to which they can be certainly

¹ As this paper goes to press, advice is received from Rome indicating that this position of the arch of Tiberius has been definitely proved by the excavations of 1900-01.

² Varro, *L.L.* 5, 42.

³ Solinus, I, 13.

⁴ Kiepert and Hülsen, *Forma Urbis Romae*; Gilbert, *Topog. d. Stadt Rom*, I, p. 258; Jordan, I, 2, p. 122.

assigned, while the positions proposed can always be disputed. As for their position with regard to each other it can only be affirmed that they belong together. The combination proposed by any one will seem unlikely to another, and both equally improbable to a third.

It is possible, however, in all these matters to content one's self with something short of complete knowledge, realizing that to know what style of monument a people erected is of far more value than to know the precise spot where it stood and the purpose it served.

ANNA SPALDING JENKINS.

1900
July — December

ARCHAEOLOGICAL NEWS¹

NOTES OF RECENT EXCAVATIONS AND DISCOVERIES; OTHER NEWS

HAROLD N. FOWLER, *Editor*

49, Cornell Street, Cleveland, Ohio

GENERAL AND MISCELLANEOUS

RUSSIA.—*The Necropolis of Lutzine.*—In *R. Arch.* XXXVI, 1900, pp. 397-402 (2 figs.), G. Katcheretz gives a summary of an account of discoveries in the necropolis of Lutzine, Vitebsk, by Messrs. Romanov and Sizov (*Materials for the Archaeology of Russia*, XIV, 1893; in Russian). The 340 tombs studied contained utensils, arms, and ornaments of various metals and other materials. The date is probably the tenth and eleventh centuries. The custom of incineration seems to have been dying out. The skulls found are similar to the Esthonian type, but the other objects point to a Finnish population.

A NEW JOURNAL OF SEMITIC EPIGRAPHY.—A new epigraphical journal has been started by Dr. Mark Lidzbarski (Giessen: Ricker), entitled *Ephemeris für Semitische Epigraphik*, the object of which is to impart all new finds and notice all new publications and articles. The new inscriptions in the first number of the journal consist of some "old Semitic" seals and weights in the Ashmolean Museum at Oxford, and five Mandaeen magical texts on clay bowls in the Berlin Museum and the Louvre. A good part of the space in this number is devoted to Carthaginian and Punic inscriptions already published, principally by Berger and Clermont-Ganneau. (*Nation*, November 1, 1900.)

NECROLOGY.—**Frederick Davis.**—Mr. Frederick Davis, a Fellow and member of the Council of the Society of Antiquaries, died July 14,

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor FOWLER, Editor-in-charge, assisted by Miss MARY H. BUCKINGHAM, Professor HARRY E. BURTON, Professor JAMES C. EGBERT, JR., Professor ELMER T. MERRILL, Mr. GEORGE N. OLCOTT, Professor JAMES M. PATON, and the Editors, especially Professor MARQUAND.

No attempt is made to include in the present number of the JOURNAL material published after December 31, 1900.

For an explanation of the abbreviations, see pp. 123, 124.

1900. He was born in 1843. For several years he had taken a considerable share in the supervision of the excavations at Silchester. (*Athen.* July 21, 1900.)

H. A. Revoil.—The French architect, M. H. A. Revoil, is dead. Apart from his professional achievements, the deceased was well known as the author of *L'Architecture Romaine du Midi de la France*. (*Athen.* December 29, 1900.)

Hermann Riegel.—Dr. Hermann Riegel, director of the museum at Brunswick, known by his numerous works on the history of art, died August 13, 1900, in his sixty-seventh year. (*Polybiblion*, September, 1900, p. 278.)

Konrad Wernicke.—Dr. Konrad Wernicke, for some years editor of the *Archaeologischer Anzeiger*, well known for his learned and able articles on classical archaeology, died at Berlin, after a short illness, August 21, 1900.

EGYPT

EXCAVATIONS IN THE FIRST HALF OF 1900.—In *Biblia*, September, 1900, is a translation of a letter contributed by Mr. G. Maspero to the *Orientalistische Literatur-zeitung* for July. At Thebes the pylon of the temple at Karnak was propped up with beams, some work was done for the preservation of the hypostyle hall, the temple of Ptah was cleared, and the Ramesseum repaired. At Deir el Bahari a tomb of the eleventh or thirteenth dynasty was opened. It contained one royal statue. Near Memphis, at Bedreshein, a house and a variety of small objects were found. At Sakkarah the chapel of the pyramid of Ounas was discovered, but only the plan can be restored. Vaults were found, containing sarcophagi, inscriptions, etc. Several mastabas here are now protected by railings and furnished with lanterns and doors. Maspero also searched at Lisht and Zaouiet el Aryân, at Sa el Hagar, Abu Ballon, Tell-Bastah, Damanhour, and El Bersheh, but without great results. He mentions briefly excavations by the Germans at Abousir, by the French at Meir, by Petrie at Abydos (Egypt Exploration Fund), by Gayet, for the Musée Guimet, at Sheikh Abadeh, Balansourah, Shech Saïd, etc., by Grenfell and Hunt in the valley of Gharak, by the Marquis of Southampton at Kom el Ahmar, and by Reisner at Coptos and Deir. The *Archaeological Report* of the Egypt Exploration Fund for 1900, pp. 1-7, contains brief accounts of the work of the Fund; pp. 12-14, of other excavations; and pp. 15-16, of the *Egyptian Research Account*, followed by a bibliography.

ABYDOS.—**The Royal Tombs of the First Dynasty.**—The eighteenth memoir of the Egypt Exploration Fund (51 pp.; 67 pls.) is devoted to the early tombs found by Petrie at Abydos. The tombs and their contents are described in detail. The names and, in most cases, the order of eight kings of the first dynasty are established: (1) Aha-Men, (2) Zer, (3) Zet, (4) Merneit, (5) Den-Setui, (6) Azab-Merpaba, (7) Mersekha, (8) Qa-Sen. Among the pottery marks are many which resemble marks found in Crete, Caria, Spain, and elsewhere. These are not connected with the Egyptian hieroglyphics, but belong to a separate *signary*. Some of them denoted numbers as well as sounds. Many of the plates reproduce these signs.

In *Berl. Phil. W.*, July 14, 1900, is a brief abstract of part of W. M. Flinders Petrie's address at University College, London, on discoveries at

Abydos, especially graves of early kings. That of Den-Setui, the fifth king of the first dynasty, was peculiarly rich. The graves of two hitherto unknown kings, Merneit and Qa, were found, and graves of fifty officials were examined. Among objects discovered were nine jars with royal seals and tablets of ivory and ebony with inscriptions.

A Twelfth Dynasty Temple. — The plan and much of the architecture of a temple of the twelfth dynasty, dated by cartouches of Amenemhat III and Useratesen III, have been found at Abydos. (DAVID RANDALL MACIVER, *Archaeological Report of the Egypt Exploration Fund, 1899-1900*, pp. 1-2.)

Cemeteries. — Cemeteries, dating from the eighteenth to the thirtieth dynasties, are briefly described by the excavator, A. C. Mace, in the *Archaeological Report of the Egypt Exploration Fund, 1899-1900*, pp. 2-3. On p. 2, D. R. MacIver mentions that he has excavated two prehistoric cemeteries, which may aid in solving ethnological questions.

ALEXANDRIA. — The Topography of the City. — In *Athen. Mith.* XXV, 1900, pp. 215-279 (pls. ix-xi; 14 cuts), F. Noack gives a report on his investigations at Alexandria from October, 1898, to March, 1899. Beginning at a point near the government hospital, trial diggings were made at a number of points over an area 1200 m. long and 600 m. wide. It was found that the oldest buildings rest on the natural rock, and are usually from 4 m. to 5 m. below the paved streets described by Mahmoud el Falaki. At several points remains were found, which enable four periods to be distinguished, the latest of which is contemporaneous with the system of streets. The first two strata seem to belong to the Ptolemaic period, while the last can scarcely be earlier than Hadrian, and may well be later. In general Mahmoud's plan is accurate, but his figures as to the breadth of the streets need revision. A system of drainage was discovered, which was modified at successive periods. The streets laid out by Deinocrates seem to have followed in general the same lines as the later plan. The paper closes with a discussion of the situation of the two *ἀγοραί* and the *palus a meridie interiecta* of Caesar. Special attention is called to the sinking of the ground since the classical time, attributed in great measure to the earthquake of August 7, 1303, which destroyed a part of the Pharos. It seems worth noticing that the side of the large middle tower of the Arabian fort corresponds exactly to the length given for the side of the Pharos by Ibn Batūtah.

GHIZEH. — A Greek Inscription. — In *C. R. Acad. Insc.* 1900, pp. 173-176, H. Weil publishes a Greek inscription from Ghizeh, in Egypt. It is part of a decree ordering the erection of statues of some benefactor. The date is between 300 B.C. and 1 A.D.

SIWAH. — Steindorff's Expedition. — In *Sitzb. Sächs. Ges.* 1900, pp. 209-239 (3 pls.), G. Steindorff gives a report of his expedition to the oasis of Siwah and to Nubia in 1899-1900. (See *Am. J. Arch.* 1900, p. 480.)

BABYLONIA AND ASSYRIA

BABYLON. — The Great Temple. — A Greek manuscript recently published by de Mély for the Académie des Sciences shows the condition of the "Tower of Babel" in 335 A.D., when the author, Harpocraton, visited this monument and measured it exactly. It had been restored in the sixth century B.C. by Nebuchadnezzar, who says in his inscription that it was built forty-two generations earlier. We now know that it was still in use in the

fourth century after Christ. It was 94 km. from Ctesiphon, south of Babylon. It had a foundation 186 m. square and 80 feet high. On this rose a tower of six steps, each 28 feet high. At the top was the sanctuary, 15 feet high. The seven stories together had a height of 67 m. The first step was 43 m. square. The sanctuary was reached by 365 stairs, 305 of which were of silver, the rest of gold. This description confirms the hypotheses of Oppert. (DE MÉLY, *C. R. Acad. Insc.* 1900, pp. 309 f.)

MUGHEIR (UR).—**Proposed Excavations.**—A national expedition has been organized for the purpose of excavating the ruins of the traditional home of Abraham, Ur of the Chaldees (Gen. ii. 31), now represented by the mounds of Mugheir (*i.e.* 'cemented with asphalt,' Gen. ii. 3), opposite the modern Babylonian town Nasarieh, on the Euphrates River. A careful estimate places the cost of carrying on the excavations for the first year at \$12,500. This is for a staff of two Americans (one archaeologist and one engineer), a Turkish commissioner, a dragoman, and a force of one hundred Arab workmen. With \$3000 more the number of diggers may be doubled, the pay of a native laborer being about ten cents a day. A subscription of \$25 will enable the Committee to employ an additional workman for one year. The excavations will be conducted by Edgar James Banks, Ph.D., sometime U. S. Consul at Bagdad, Turkey. Subscribers of \$5 or more will receive copies of the *Quarterly Reports* on the work of the Expedition. Checks should be made payable to George Foster Peabody, Treasurer, 27 Pine Street, New York City.

NIPPUR.—**American Excavations.**—In the *Independent*, November 13, 1900, pp. 2717-2720 (4 figs.), H. V. Hilprecht briefly summarizes the results of the latest campaign of the University of Pennsylvania, at Nippur, which began in the late summer of 1898. The plan was to determine these points: First, the precise extent of the pre-Sargonic settlement at ancient Nippur and the relative position it held in the earliest period of Babylonian history. Second, the precise character of the Temple of Bel during the whole period preceding Ur-Gur, of Ur, who reigned about 2700 B.C. Hitherto it had been believed that Ur-Gur introduced the stage-tower as a form of temple in Babylonia. Third, the precise boundaries and extent of the territory enclosed in the old city walls, and the course of the walls. Fourth, the position of one or more of the city gates. Fifth, the age, extent, and exact character of a public building discovered during the first campaign and partially excavated by the second expedition. Its prominent feature was a colonnade. Sixth, the distinguishing features in the modes of burial at different times. Seventh, the position and character of the Temple library, which Dr. Hilprecht believed all along was in the most southern group of the mounds of the eastern side of the Shatt-el-Nil. Besides this, the pottery was to be studied and classified by Dr. Hilprecht. "Now," says Dr. Hilprecht, "we know that the Nippur of the fifth and fourth millennium had practically the same extent as the Nippur of the days of Artaxerxes and Darius. We have proved the correctness of my theory concerning the Temple library by finding it at the spot where for twelve years I knew it would be unearthed. Nearly ninety thousand documents have been taken from its rooms and shelves. We have found convincing evidence that the stage-tower I have referred to as introduced by Ur-Gur existed in Babylonia long before the old Sumerian race was con-

quered by the invading Semites. I have determined that the large building bearing the colonnade was not a creation of the Cassite kings who ruled Babylonia from about 1700 B.C. to 1100 B.C., as was stated on the authority of the second expedition. It was constructed about one thousand years later, near 300 B.C. We have not only solved the problems we set ourselves on the beginning, but we have made many discoveries having an important bearing upon the topography and history of ancient Nippur and upon the religious ideas and customs of the daily life of the Babylonian people" (Cf. *S. S. Times*, December 1, 1900; *Berl. Phil. W.* November 17, 1900; *Biblia*, July, August, September, October, November, December, 1900; *N. Y. Sun*, September 2, 1900.)

TELLO.—**Early Sculptures.**—In *C. R. Acad. Insc.* 1900, p. 151, is a résumé of a paper by L. Heuzey, describing a circular altar found by de Sarzec in a building below the construction of Our-Nina. On the altar is a relief representing a king who holds a staff or sceptre and presents a diadem to a young warrior leaning on a lance. This is the earliest known Asiatic relief.

Early Inscriptions.—Mr. de Sarzec has brought from his last excavations at Tello many specimens of Babylonian art, which will enrich the Louvre. Among his new discoveries are several thousand inscriptions, among them one on a plate of gold. This disproves the theory that the Babylonians wrote inscriptions only on bricks and bronze tablets. (*Chron. d. Arts*, August 25, 1900.)

ASSYRIAN AND HITTITE RUINS.—After the excavations at Nippur were closed, in May, Professor Hilprecht proceeded to Constantinople on horseback, through the territories of the Shammar and Taï Bed'ween, then at war with each other. He examined the more important Assyrian ruins, Kileh Shergat, Nimrûd, Nebi-Jûnus, and Kuyunjik (ancient Nineveh), etc., and devoted considerable time in June and July to the exploration of the northern districts of the ancient Hittite empire, and to the Cappadocian mounds, particularly to Kül Tepe, whence he obtained two new Hittite inscriptions and a large number of cuneiform tablets, together with other important archaeological objects, for his work on early Cappadocia, which for some years has been in the course of preparation. (*S. S. Times*, October 6, 1900.)

SYRIA AND PALESTINE

Travels, Antiquities, and Inscriptions.—In the *Mittheilungen des deutschen Palaestina Vereins*, 1900, pp. 1-9 (fig.), Dr. Sellin continues his account of his journey in Palestine in 1899. He describes a number of sites, a few small objects, including an interesting bronze idol, and publishes a few fragments of late Greek inscriptions. *Ibid.* pp. 10-13, G. Schumacher publishes twelve late inscriptions. One is a milestone, one a Latin inscription (*R. Biblique*, January, 1899, p. 18, No. 20); the rest are Greek. Several have been previously published. In the *Z. D. Pal.* V. 1900, pp. 1-77, M. Hartmann continues his 'contributions to the knowledge of the Syrian steppe,' giving some information about sites.

DEIR-EL-QALA'A.—**The Phoenician Temples.**—In *C. R. Acad. Insc.* 1900, pp. 232-259 (plan), Rev. Father Ronzevalle described the ruins of Deir-el-Qala'a, in the Lebanon range above Beyrouth. This was the centre of the cult of Baal-Marcod, and was as important for Beyrouth as

the celebrated sanctuary of Aphka, at the source of the river Adonis, was for Byblus. Besides remains of walls and fragments of sculpture, a few Latin inscriptions were found. These were apparently all gravestones, except one dedication to Hadrian.

JERUSALEM. — Graeco-Roman Tombs. — In *R. Arch.* XXXVI, 1900, pp. 392-396 (5 figs.), S. Reinach describes four sarcophagi found December 29, 1899, at the Schools of the Israelite Alliance, about a mile from Jerusalem. The stone sarcophagi are massive, and not richly adorned. No coins were found, but the date of the tombs is probably not far from the time of Augustus.

TELL EJ-JUDEIDEH, THE VALLEY OF HINNOM, THE DEAD SEA. — Excavations and Investigations. — The principal feature of the *Quarterly Statement* for July of the Palestine Exploration Fund is Dr. Bliss's illustrated report on the excavations at Tell ej-Judeideh. Extensive remains of a Roman villa were discovered, and there were numerous pottery finds, including thirty-seven jar-handles with royal stamps; making, with those found in other places, sixty-one of these interesting remains of a period from 800 B.C. to 500 B.C. Mr. Macalister describes the series of rock-cut tombs in the so-called Valley of Hinnom, and their incised and painted inscriptions, while Mr. Gray Hill reports an attempt to explore the precipitous eastern shore of the Dead Sea in a small sail-boat. Dr. Shick tells of several artificial but significant changes in the surface of the ground about Jerusalem, through extensive building operations, — valleys being filled and hills removed. (*Nation*, August 16, 1900; cf. HILPRECHT, in *S. S. Times*, October 6.) The *Nation*, August 23, 1900, regrets the meagreness of the results of excavations in Palestine, but hopes for better things, and calls attention to the American School in Palestine, which opens this year (1900), with Professor C. C. Torrey as director.

TELL SANDAHANNAH. — A Seleucid City. — At Tell Sandahannah, Dr. F. J. Bliss, excavating for the Palestine Exploration Fund, laid bare a Seleucid city. Among other objects, some fifty fragments of stone tablets with inscriptions in Greek and Hebrew, probably incantations, were found. The Israelitish city below the Seleucid city was touched at but one point. Dr. Bliss thinks it may have been Mareshah or Moresheth-Gath of the Bible. Dr. Bliss has been obliged to resign, on account of ill health. (*Nation*, December 6, 1900, from the October *Quarterly Report* of the Pal. Ex. Fund.)

In *C. R. Acad. Insc.* 1900, pp. 536-541, Clermont-Ganneau discusses a fragmentary inscription found by F. Bliss at Sandahannah (Eleutheropolis), in Palestine. The text, ... *νόην μεγάλην* | ... *ώρα τὴν ἐγ βασιλέως* | ... *βασιλίσσης*, is restored, so as to show that it refers to Arsinoë, daughter of Ptolemy and Berenice. The inscription was the dedication on the base of a statue. A second fragment belongs to a similar dedication of a statue of Ptolemy IV Philopator. Another fragment, restored [*Σκόπα*] *ς Κράτωρος* | [*Ἀπόλλ*] *ωνι εὐχὴν*, is ascribed to Scopas, the general of Ptolemy IV and Ptolemy V. Clermont-Ganneau refers also to sixteen lead figurines, which, he thinks, represent the persons against whom the magic incantations found in the same excavations are directed.

ASIA MINOR

SITES IN CARIA AND LYDIA.— In *J.H.S.* XX, 1900, pp. 51-80 (13 cuts), W. R. Paton identifies certain ancient sites in southern Lydia and eastern Caria, publishes ten inscriptions, and describes a Lydian form of tumulus which prevails in this region, containing flat-roofed double chambers and surmounted by phallic or globe-topped termini.

SITES AND DATES IN PONTUS.— Recently found inscriptions settle the position of Andrapa-Neoclaudiopolis, east of the Halys, and the era of this district, 6 B.C., and include an earlier copy than any yet known of the correspondence of Abgar of Emessa with Christ. Together with thirteen Roman milestones, dating from Nerva to Constantine, they throw light on the varying limits of Roman and Galatian Pontus, Paphlagonia, etc. (J. G. C. ANDERSON and J. A. R. MUNRO, *J.H.S.* XX, 1900, pp. 151-166.)

MERSINLI. — A Metrical Epitaph.— In the *Revue des Études Anciennes*, II, 1900, pp. 253-255, is a publication, by A. Fontrier (from the *Courier de Smyrne*, June 6, 1900), of a metrical epitaph in four parts on four sides of a marble block, found halfway between Mersinli and Bournabat, near Smyrna. It was in honor of Paula (Πάλλα), wife of Victor (Βίκτωρ). It may belong to the early third century after Christ, but, as Paul Fournier (*ibid.* pp. 255-258) observes, the date cannot be accurately determined from the forms of the letters, the clumsy style, or the mixed dialect.

MILETUS. — The Decree in Honor of Hippostratus.— The excavations of the Berlin Museum, at Miletus, have yielded a complete copy of the decree of the Ionians in honor of Hippostratus of Miletus, a friend of King Lysimachus. (See DITTENBERGER, *Sylloge*², 189.) The new inscription shows that the decree does not fall between 295 B.C. and 287 B.C., but between 287 B.C., the founding of Arsinoeia, and 281 B.C., the death of Lysimachus. (C. FREDRICH, 'Hippostratos von Milet,' *Athen. Mith.* XXV, 1900, pp. 100-106; pl. iv.)

PERGAMON. — The Gate and the Agora.— Mr. Charles H. Wellér writes that, at the meeting of the German Institute at Athens, held on January 2, 1901, Dr. Dörpfeld gave an account of the excavation of the later surrounding wall and the agora at Pergamon. The wall showed traces of three gates on the north slope of the hill, where the most perfect remains are found. It can be traced around to, and through, part of the modern city. The chief point of interest is the large main gateway just to the south of the "*Armenischer Friedhof*," marked on the earlier maps. The gateway has well-preserved foundations, and the general outline can easily be traced. The gate consists of a large, square court, flanked by strong towers on the south or outside corners. There is a small entrance (for a foot-path) on the lower side, but the main doors are on the west. Three towers afforded ample protection for the exterior doors. Close along the eastern side of the court runs a line of octagonal columns, forming part of a façade which met the gaze of persons entering the court from the city or from the plain. Here seem to have been the mouths of numerous water channels, remains of which are found higher up the slope. In its doubling of functions, this gateway resembles the Dipylon at Athens.

Stone pavements of two different periods, belonging to the main road, have been found. On both sides of the road above the gate are numerous bases of votive offerings. Each course of stone in the walls consists of a series of "headers" and "stretchers," arranged so that the "stretchers" are in pairs, having a "header" on each side of the pair. The foundations of the walls are carried down over a metre below the surface of the rock, the softness of which made this precaution necessary to prevent undermining. In Roman times the plan of the interior of the gateway was somewhat changed, and some small rooms were formed on the north and east sides. (According to *Chron. d. Arts*, November 24, 1900, the gateway is probably the work of Eumenes, son of Attalus, and dates from 197 B.C. Cf. *Berl. Phil. W.* December 1, 1900.)

The other spot excavated was the agora, almost directly north from the gateway. This was a long, rectangular court, surrounded within by a row of columns; the portico thus formed was in front of a row of shops, which formed the four sides of the court, extending through most of the circuit. They were two stories high, except at the northwest corner, where the rock forbade. The south side is high above the natural level, so that the road leads up to a stairway near the northwest corner, there being another entrance almost diagonally opposite. The colonnade is Doric. At the northwest corner the Roman inhabitants built a platform, from which one could look down the adjacent porticoes, which were then arched over.

Various inscriptions and sculptural remains were found. One of the "shops" was a perfect storehouse of Roman lamps. The most important sculpture found is a head of Alexander, of excellent style.

SMYRNA. — A Metrical Epitaph. — In the *Revue des Études Anciennes*, 1900, pp. 359 f., A. M. Fontrier publishes an epitaph from Smyrna. On the stone is a relief representing a child. The date (125 or 126) is 42 A.D. The inscription reads:

Νήπιος ἐν τύμβῳ τίς ἄρ' ἔσθ' ὧδε; ὡς ἀταλαῖσι
χειρὶν γλακτοπηγῇ μαστῶ ἐπικέκλιτε. —
Οὔνομα Μηνογένης μοι, ἐτέκνωσεν δέ με Λόλους
νέον πένθει στυγερῶ προὔλιπον ἐν μελάθροισ,
— φεῦ μοίρης εἰκάτω κριτήρια ὡς ἀλογίστω[ς] —
αὐγῆς ἀκτῖνα[ς] καὶ πατρίους θαλάμους.

Aphrodite Stratoniceis. — In the *Revue des Études Anciennes*, II, 1900, pp. 251-253, and *R. Arch.* XXXVII, 1900, pp. 160-162 (from the *Courier de Smyrne*, May 30, 1900), A. Fontrier publishes the following inscription, found at Bounarbashi, near Smyrna: Τέμενος | ἱερὸν | Ἀφροδίτης | Στρατονικίδος | θεοῦ. Ἡ δεκάτη καὶ | τὸ παραπεπραμένον ἀπὸ τῶν πλεῖθρον κατατάσσει[ται] εἰς τὰς ἱερὰς | Μητρὸς ὁδοῦς]. The latter part is restored with the aid of a similar inscription (*C.I.G.* 3156), also published. The new inscription is of the time of the Diadochi. The two texts show the existence of two sanctuaries of Aphrodite Stratoniceis, — one at the "Koula" of Mortakia, the other at Bounarbashi. She was evidently an important deity.

The Baths of Agamemnon. — In the *Revue des Études Anciennes*, II, 1900, pp. 249-251, is a discussion of the site of the baths of Agamemnon, about five miles from Smyrna, by A. Fontrier (from the *Courier de Smyrne*, May 23, 1900). The hill above the baths has been erroneously called

Korakion. A temple of Apollo, not of Aesculapius, was near the baths. The temple of Aesculapius was southwest of the city, where is now a Jewish cemetery. Here several fragments of ancient marbles have been found, including one with a dedication σε]βαστῶ Καίσα[ρ].

YORTAN. — **An Ancient Necropolis.** — At Yortan, in the valley of the Caicus, near the site of ancient Stratonicea, Paul Gaudin has discovered a necropolis belonging, apparently, to the same period as the pre-Mycenaean settlements at Hissarlik. The bodies were buried in large jars. The pottery found resembles that of Hissarlik. Other objects, idols, etc., are similar to those found at Hissarlik. This discovery strengthens the arguments of those who believe in a connection of race, or at least of civilization, between the primitive inhabitants of Asia Minor and seek in Phrygia the centre of the civilization which extended to Cyprus. (M. COLLIGNON, *C. R. Acad. Insc.* 1900, pp. 269 f.)

GREECE

ARCHAEOLOGY IN GREECE IN 1899-1900. — The most important event of the year has been the finding in Crete of the vast Mycenaean palace at Cnossus, with its corridors, store-chambers, throne-room, east and west courts, marvellous frescoes, and library of clay tablets in Mycenaean characters. The contemporary pottery and the styles that preceded and followed it in Crete were also found at Cnossus and in a post-Mycenaean settlement farther east. In the Dictaeon cave of Zeus, the *adyton*, a very remote lower cavern, has been found, and numerous small objects, bronzes, etc., brought to light both here and in the upper cave. Further excavations at Goulas (Lato) add to the interest of that site. Search for Mycenaean remains in the Ionian Islands supports, at least negatively, Dr. Dörpfeld's doubts about the historic identification of the islands of the Odyssey. The publication of Hiller von Gaertringen's book has not prevented further work in Thera, producing new inscriptions, pottery, etc. In Euboea, the fortress of Dystus has been studied, and buildings, inscriptions, and archaic sculptures found at Eretria.

On the mainland, beehive tombs with geometric pottery, cist graves with Mycenaean contents, and a very early neolithic settlement have been explored in Thessaly. In Aetolia, a vast bed of sacrificial remains is found to underlie the temple at Thermon. Work continues at Delphi in the temple of Athena, at Sunium, in Athens, the Stoa of Attalus being finally cleared, at Megara, where the sixth century waterworks have been found, and notably at Corinth, where more ancient reservoirs and fountains have come to light with numerous pieces of architectural sculpture. The entire precinct at Epidaurus has been cleared up and a museum built. The discoveries since 1893 are embodied in P. Kavvadias's new publication. In Asia Minor, the work at Priene has been finished. That begun at Miletus promises well and has already yielded inscriptions of wide range of date. At Ephesus a Greek monumental gateway is found which combines lintel and arch construction. A bronze statue of an athlete, found in fragments, has been put together at Vienna. Aegean pottery going back as far as 4500 B.C. is among the contents of first dynasty tombs at Abydos, Egypt. (R. C. BOSANQUET, *J.H.S.* XX, 1900, pp. 167-181.)

Work of the Greek Archaeological Society in 1899. — In Πρακτικά for 1899, pp. 9-24, is a sketch of the work of the Greek Archaeological

Society in 1899. Excavations were carried on at thirteen places: the Stoa of Attalus, Colonus, Peiraeus, Sunium, Plataeae, Thermopylae, Thermon, Epidaurus, Mycenae, Eretria, Cephallenia, Rhenea, Marmariani in Thesaly. The results of these excavations are mentioned elsewhere in this JOURNAL. Work was also done for the preservation of the Parthenon and the monument of Philopappus at Athens, and the temple of Poseidon at Sunium.

Work of the French School at Athens in 1900.—In *C. R. Acad. Insc.* 1900, pp. 486–487, Mr. Homolle gives a sketch of the work of the École d'Athènes in 1900. Mr. Chapot undertook the investigation of the Roman *Limes Syriacus*, but an accident stopped him just as he announced the discovery of some milestones. In **Bithynia**, Mr. G. Mendel found three hundred inscriptions, fixed the site of Adrianopolis, and gained information about ancient roads. In **Thrace**, Mr. Seure investigated tumuli near Philippopolis. Objects found ranged in date from prehistoric times to the Roman period. The old Bulgarian city Tirnovo and the Roman Nicopolis have been investigated. In **Crete**, Mr. Demargne excavated at Itanus (Eremopoli) and in the archaic acropolis of Goulas. Several walls, the gate of the road to the agora, the agora itself, the prytaneum, several temples, offerings of gold and silver, and a treasure of Attic coins have already been found. A plan of the city has been made. At **Delphi**, after the temple, the stadium, the theatre, the fount of Castalia, and the gymnasium had been laid bare, attention was turned to the hippodrome and the temple of Athena. After the site of this temple and the place of the doors had been found, the foundations of a marble treasury of the fifth century B.C. were uncovered. It resembles the treasury of Cnidus. A round marble temple and a stone temple were also found. These buildings were adorned with sculptured friezes.

ANTICYTHERA.—**Antiquities found in the Sea.**—At a small island called Anticythera, between Cythera and Malea, the right hand of a bronze statue of more than life size was found by divers. The statue may have represented Poseidon. The work is good. (*Εστία*, November 23 = December 6, 1900.) The place—at a depth of water of about 30 or 35 fathoms, and about 10 m. from the steep, rocky shore—was found by the divers to contain a treasure of ancient remains. Evidently a vessel containing them had sunk here. The following objects have been brought to Athens: two marble male torsos of excellent workmanship, one of life size, the other smaller; many fragments of marble and bronze statues; all sorts of terra-cotta and bronze vessels; part of a bronze hand bound with a cestus; a bronze head of a boxer, which seems to belong to the same statue as the hand just mentioned, a work of about 300 B.C.; part of a right foot of marble, of excellent work; a bronze sword of late date. The work of the divers was hindered by bad weather, but is to be resumed. (*Εστία*, November 27 = December 10, 1900.) Among numerous fragments, one almost perfectly preserved life size bronze statue of a youth has been found. The youth is kneeling on his right knee. His right hand hangs down. The left arm is wanting, but probably the left hand was held as a shade for the eyes, as the youth gazed at something in the distance. (*Ἀστὺ*, December 13 = 26, 1900.) Cuts of the marble youth and a bronze head of a bearded man are published in *τὸ Ἀστὺ*, December 29, 1900 (= January 11, 1901). In.

τὸ Ἄστυ, December 28 (= January 10), the discovery of a bronze statue, probably Apollo or Hermes, is reported.

ATHENS. — **The Stoa of Attalus.** — The excavations of the Greek Archaeological Society at the stoa of Attalus, in 1899 (cf. *Am. J. Arch.* 1900, p. 488), are described, with two plates, by K. D. Mylonas, *Πρακτικά* for 1899, pp. 70-75. The plan and structural details of the building are now clear. Several inscriptions, fragments of architectural members and of sculpture were found. Most interesting is a head of Athena resembling the one formerly wrongly placed on the torso of the "Lemnian" Athena in Cassel. (Clarac, pl. 462 F, No. 867 A, Müller-Wieseler, pl. XX, No. 210.)

The Wall of the Acropolis. — Parts of the wall of the Acropolis are in danger of falling, and a commission is trying to discover the best means of preserving it. (Ἄστυ, December 13 = 26, 1900.)

Graves. — At Athens more graves of the fifth and fourth centuries have been found near the necropolis described by Brückner (*Athen. Mitth.* XVIII, 1893, pp. 443 ff.). The conditions made it possible to examine carefully only a few. In one case at the bottom of a deep pit were four skeletons, and in the shaft above remains of three burnt offerings, evidently sacrificed to the dead below. Remains of walls of sun-dried bricks belonging to an unintelligible structure also appeared, but could be only partly cleared, and are now covered. At the Dipylon a small tumulus has been opened, which contained many tiles and children's terra-cotta sarcophagi, of which a few were opened, without finding much of value. (R. DELBRÜCK, *Athen. Mitth.* XXV, 1900, pp. 308-311; 1 cut.)

An Ancient Cemetery. — In the neighborhood of Callithea, between Athens and Phalerum, about 150 graves have been examined. The necropolis seems to have been used for the interment of prominent persons. Among objects found is a fine, well-preserved marble relief of the fifth century B.C., representing a young couple, the man standing before his wife, who sits on a chair and holds a child in her arms. The inscription reads: *Gigistrates*. Besides this many white lecythi, for the most part broken into large pieces, and numerous other vases came to light, in many cases with remains of gilding. A decree on a plate of lead, a bronze dish, many silver rings with reliefs, and two inscriptions, one of which mentions an Apollodorus of the deme Cholleidae, the other an Apollodorus of the deme Cytherus, were found. (*Berl. Phil. W.* December 22, 1900, from the *Vossische Zeitung*.)

Apollo from Keratea. — Dr. H. F. De Cou writes from Athens that the archaic figure recently discovered at Keratea and now in the National Museum is of unusual interest. He says:

"It is a statue of about life size, belonging to the early archaic standing nude male type. The left hand and both feet are missing, the legs are broken in pieces from a little below the body, the right hand is damaged, and there is an abrasion on the left side of the chin. Otherwise the preservation is excellent. The material is a large-grained, fairly translucent marble. The statue is a carefully modelled and finished specimen of its type. . . . The shoulders are high and square, as in the Ptoön figures. The arms, which are but slightly separated from the body, hang stiffly down, the preserved right hand being attached to the thigh. In the modelling of knee and shin the sculptor displays considerable anatomical knowledge, though the statue does not, in this respect, quite reach the stage of the

'Apollo' of Tenea. The left leg is advanced. . . . The eyes are large, superficial, and slanted inward. The clearly cut lids meet at the outer corners without any overlapping. The corners of the mouth are drawn upward in a smile, which suggests the Apollo of Thera, but the chin is stronger than in that statue. The prominent nose, with its slightly bulbous end, calls to mind some of the early Attic reliefs. In the arrangement of the hair the statue resembles the other figures of its type. About the front is a heavy band or diadem, beneath which the hair falls over the forehead in wavy locks, somewhat like those in the head from Ptoön (*Kavvadias*, No. 15), but less mechanically carved."

The Votive Statue of Euthydikos.—Mr. Charles H. Weller writes from Athens that a Danish lady, Miss Kyar, has shown that the base in the Acropolis Museum, inscribed with the name of *Εὐθύδικος* (*Jb. Arch. I*, 1887, p. 219; Lolling, *Κατάλογος τοῦ Ἐπιγρ. Μουσείου*, No. 146), connected by Winter (*Jb. Arch. I., l.c.*) with the bust published *Musées d'Athènes*, pl. xiv (COLLIGNON, *Hist. de la Sculpt. Gr. I*, pl. vi; cf. OVERBECK, *Plastik*,⁴ I, p. 197), really belongs to the statue published *B.C.H.* 1890, pl. vi.

The Russian Archaeological Institute.—The Athens correspondent of the *Allgemeine Zeitung* states that the Russian Archaeological Institute has secured a permanent seat in that city. Rooms in the Petraki monastery have been gratuitously placed at the service of the Russian Embassy for the purposes of the Institute. (*Athen*. December 15, 1900.)

COS.—**Various Discoveries.**—The *Vossische Zeitung* reports that a theatre of the Greek period, large buildings of Roman times, an archaic domed tomb, a temple with cella and throne (probably sacred to Asclepius), and part of the ancient waterworks have been found at Cos. (*Berl. Phil. W.* December 22, 1900.)

ARCHAEOLOGICAL STUDIES IN CRETE.—In *Mon. Antichi*, IX, 1900, pp. 285–428 (75 cuts), A. Taramelli describes some thirty ancient sites in Central Crete, chiefly Mycenaean fortified positions, with suggestions as to their actual and mythological relation to Athens, etc. An Appendix, pp. 429–446, summarizes the present knowledge of Cretan script. In *Rend. Acc. Lincei*, 1900, fasc. 5–6, pp. 304–313, L. Savignoni reports the work of the Italian archaeologists in Crete from November 9 to December 13, 1899. The exploration of the western provinces was completed and also the excavation of Axus and the study of the material discovered there. The ruins of Kantanos and Hyrtakina were explored and the neighboring necropolis. Nothing of the Mycenaean period was found. Near Palaeochora, the necropolis of the ancient Kalamyde and another at Haghiós Kirkós were visited. Roman baths and other ancient remains were studied at Suja. Unpublished inscriptions and works of art were found in various places. (Cf. *Am. J. Arch.* 1900, p. 490.)

CNOSSUS.—**The Ancient Palace.**—In *Arch. Anz.* 1900, 3, pp. 141–151 (pl.; 6 figs.), P. Wolters describes in some detail Mr. A. J. Evans's Cnossian discoveries of last spring (see *Am. J. Arch.* 1900, p. 490), and gives views of the throne-room, its anteroom, a store-chamber, showing rows of *pithei* and the lead-lined sunken treasure-boxes, the court and corridor, on whose walls were the frescoes of life size figures in procession, and specimens of the stone-carving, pottery, and inscribed clay tablets.

Mr. Evans's discoveries are briefly described from a letter from the discoverer in *C. R. Acad. Insc.* 1900, pp. 266-268. Cf. *Berl. Phil. W.* July 14, 1900. In *Biblia*, September, 1900, one of Mr. Evans's letters in the *Athen.* is reprinted, and (p. 202) the importance of the various objects found is emphasized. Another communication from Mr. Evans and Mr. D. G. Hogarth is published in *Biblia*, January, 1901. In the *Archaeological Report* of the Egypt Exploration Fund for 1900, pp. 60-66 (pl.), Mr. Evans writes of 'The Palace of Knossos in its Egyptian Relations.' Strong Egyptian influence upon Cretan ("Minoan") civilization is evident, but the Cretan artists were not servile borrowers. In *Biblia*, November, 1900, is a reprint from the London *Times* of part of a letter by Mr. Evans, dealing especially with the early writing. See also *Biblia*, December, 1900; the *Nation*, August 2, 1900 (Louis Dyer); the New York *Tribune*, Sunday supplement, November 18, 1900 (a description reprinted from the London *Times*); Boston *Transcript*, November 24, 1900.

An association called the *Cretan Exploration Fund* has been organized under the patronage of H. R. H. Prince George of Greece for further work at Chossus and elsewhere in Crete. Contributions may be sent to Mr. George A. Macmillan, St. Martin's Street, London, W.C., or to Messrs. Robarts, Lubbock & Co., Lombard Street, London, E.C.

EPIDAUROS.—**The Excavations and the Waters.**—The excavations at Epidaurus being finished, P. Kavvadias publishes several photographic views of the ruins, with brief explanations, in *Πρακτικά* for 1899, pp. 103-105; pls. iii-vi. A chemical analysis by A. K. Damberges, showing that the Epidaurian waters are slightly alkaline, and would be useful in some diseases of the bladder and stomach, is appended.

The Stadium.—The entrance to the stadium and the entire side of the starting-place have been uncovered. This completes the excavation of the stadium. Several important inscriptions and a mosaic have recently been discovered. The work is now given up for the season. (*Ἄστυ*, November 16 = 29, 1900.)

EPIDAUROS LIMERA.—**Three New Decrees from the Temple of Apollo Hyperteleates.**—In *Ἐφ. Ἀρχ.* 1900, pp. 153-160, K. Kourouniotes publishes three honorary decrees of the Kotyrtatae, whose town was probably one of those of the Eleutherolaconians. The decrees were bought with those published in the *Dialekt-Inschriften* of Collitz and Bechtel, III, Nos. 4543-4544. They are in honor of Aristagoras, son of Agexenus, a Lacedaemonian, Peiitas (?), son of Cratesinicus, of Asopus, and Archagoras, son of Archagoras, of Cythera, respectively.

ERETRIA.—**Excavations in 1900.**—The following account, dated November, 1900, was sent by Mr. Benjamin Powell.

The excavations of the Greek Archaeological Society, undertaken at Eretria under the superintendence of the ephor, K. Kourouniotes, were concluded for the year November 17, after a campaign of six months.

A long line of tombs was excavated on each side of the road which passes out toward Vathya, southeast from Eretria; others, in the hollow between the foot of the Acropolis and the conical hill to the northwest of it, which contains the chamber tomb described in *Ἐφ. Ἀρχ.* 1899, p. 221 (cf. *Am. J. Arch.* 1900, p. 492); and others, by the side of the road which leads to Chalcis.

Many vases have been discovered in these tombs, the most important of which are several beautiful white lecythi, bearing *Lieblingsnamen*, and some interesting fragments of geometric ware, with the customary types of men, horses, and chariots. The tombs contained several gold ornaments and necklaces of great beauty, — one necklace, consisting of gold beads in the form of acorns, with a large gold bull's head as a pendant centre-piece, being especially fine.

A curious foundation wall, of large square blocks and architectural fragments, has been uncovered at a short distance to the west of the so-called temple of Dionysus, which was excavated in 1894 by the American School. Mr. Kourouniotes takes it to be the substructure of a large tower, through which the road from Chalcis passed into the city. The road seems to have gone through a gateway in the outer face of the tower, and then to have turned at right angles inside the tower, finally passing out through the side. A large passage, which goes under the entire structure, was probably a waterway for a small brook which comes down from the hillside.

Trial excavations on the slope below the gymnasium, which was excavated by the American School in 1895, have brought to light only a few unimportant walls. No great retaining wall was discovered, such as it was thought might exist.

The foundations of a small sanctuary, halfway up the southern slope of the Acropolis, have also been laid bare. It consisted of merely a *naos* and *pronaos*, surrounded by a peribolus wall, which latter seems to have served also as a retaining wall on the lower side. Mr. Kourouniotes found many small terra-cotta figures in the spaces between the foundation walls, but nothing by which the sanctuary could be identified.

In the plain, on the eastern outskirts of the modern village, a Roman bath was found, at a depth of but one foot under the modern surface of the ground. It consists of two contiguous, circular courts, paved with mosaics. About each court is a row of low seats, facing inward. In front of each seat is a small, shallow, circular basin of marble. These basins are not more than a foot in diameter, and can have served for hardly more than foot-baths. The ring of basins is separated from the mosaic flooring by a low parapet of tiling.

By far the most important discovery during the season's work at Eretria was that of the foundations of a large temple, in the middle of the modern town. The temple platform, which alone remains, is of large dimensions, approximating those of the old temple of Athena on the Acropolis at Athens. This has been laid entirely bare, except at one corner where the land has still to be expropriated. Only one capital of a column has been found to show that the temple was Doric in style. It has been identified, by inscriptions found among the ruins, as the temple of Apollo Daphnephorus. The axis of the temple runs nearly north and south, and the entrance seems to have been at the southern end, for here was found a line of bases for statues, as well as many slotted supports for inscribed stelae. The interior plan of the temple is complicated, and has not yet been determined; for the large temple seems to have been built upon and to have enclosed the ruins of an older and smaller structure. The remains of the older temple probably date from the time of the destruction of the city by the Persians.

Several pieces of sculpture were discovered among these ruins, and are

believed by Mr. Kourouniotes to have been parts of the pediment groups. The largest is the body of a horse, with the large veins clearly depicted; but the most important are a well-preserved torso of Athena, with the aegis on her breast, and a group representing a man carrying off a maiden, possibly Peleus and Thetis. The style of these works is archaic, with some peculiarities in the treatment of the hair and face.

[See also R. DELBRÜCK, *Athen. Mith.* 1900, pp. 311-312; *ibid.* p. 116; cf. *Berl. Phil. W.* July 14 and November 10, 1900.]

Inscriptions and Sculptures.—In 'Εφ. 'Αρχ. 1900, pp. 6-26, K. Kourouniotes publishes a relief from the sanctuary of Artemis Amarusia at Eretria, and two reliefs from Larisa, representing Apollo, Leto, and Artemis. Not far from the northeast corner of the wall of Eretria two inscriptions, 'Απόλλωνος | Δηλίου | Δητοῦς | 'Αρτέμιδος, and ὕρος | ἱεροῦ, were found. These show the site of a sanctuary of the Delian Apollo, of which few traces have as yet come to light. Two torsos of Artemis—one in long flowing drapery, found in the city of Eretria, the other in Amazon costume, found near the inscriptions mentioned above—are published in half-tones. In the *Πρακτικά* for 1899, pp. 34-37, Kourouniotes gives an account of the excavations of 1899.

MEGARA.—**The Fountain of Theagenes.**—In December, 1899, R. Delbrück and K. G. Vollmöller excavated at Megara, in search of the fountain of Theagenes (Paus. I, 40, 1). The conduit was laid bare in three places, one manhole was opened, and parts of the fountain itself and the escape-pipe were discovered. The conduit was lined with stone slabs, and originally covered by similar stones, but these have generally disappeared. The water was at first brought through a clay pipe, but later a clay gutter was used. The fountain itself, so far as it has been excavated, consisted of a large basin for the water, containing apparently thirty octagonal columns, and at the south end a narrow basin from which the water was drawn, as is shown by the balustrade, which is deeply cut by the ropes used for lowering the jars. The excavations are to be continued, if the modern houses can be secured. ('Das Brunnenhaus des Theagenes,' *Athen. Mith.* XXV, 1900, pp. 23-33; pls. vii, viii; 5 cuts.)

MYCENAE.—**Two Tombs.**—In July, 1899, Chr. Tsountas, being at Mycenae, excavated two chamber-tombs south of the so-called treasury of Atreus. The contents were not rich. Most important were four gems (three with representations of women, one with a lion and a man), several gold ornaments, five stone jars, a small nude female torso of bone, and some objects of "Egyptian porcelain." (CHR. TSOUNTAS, *Πρακτικά* for 1899, pp. 102-103.)

OENIADAE.—**American Excavations.**—Mr. Benjamin Powell sends a summary account of some excavations at Oeniadae conducted by Dr. Forman, Mr. Sears, and himself in the autumn of 1900. The theatre was found to have seats, for the most part, cut from the solid rock. The circle of the orchestra was bounded by a row of limestone blocks, originally held in place by clamps. The curb of the orchestra is about 9.40 m. high, and finished at its upper and lower edges with a simple moulding. The orchestra is 15.37 m. in diameter, and is filled with pebbles laid in cement. The form of the stage-buildings is easily traced. The line of the two parascenia projects only 0.49 m. from the proscenium proper. Each parascenium had three

doors, or *pinakes*, at least. In the proscenium proper is space for three openings of 1.25 m. and a door 1.62 m. wide in the middle. The columns between these openings have the form of three clustered half-columns. The stage-building seems to have been one large room, the roof of which was supported by columns, and two small side rooms. On a hill within the city walls, foundations of a large building, of at least fifteen rooms, were found. Its purpose is not clear. A few terra-cottas, including a late archaic head of Helios, and some other objects, were found here. The foundations of a small temple, consisting of *naos*, *pronaos*, and *opisthodomus*, were excavated on a promontory near the harbor. A circular building near the upper end of the harbor was found to be a bath or a spring house, with bowls in the flooring of white limestone. Excavation here was stopped by the flowing in of water. The examination of the ship-sheds was begun, and they were found to resemble those of Peiraeus; but the coming on of rain and bad weather forced the excavators to delay further work until spring. A tile stamped ΦΙΛΩΝΟΣ suggests connection with the architect of the arsenal at Peiraeus. Tiles marked ΦΙΛΙΠΠΟΥ are from the towers of the city wall built in 219 B.C. by Philip V.

PAROS.—An Inscription relating to Archilochus.—F. Hiller von Gaertringen ('Archilochosinschrift aus Paros,' *Athen. Mith.* XXV, 1900, pp. 1-22; pls. i-iii; 2 cuts) publishes a fragmentary inscription from Paros which seems originally to have formed part of a building erected in honor of the poet Archilochus. The document seems to have contained an account of the life of Archilochus, based on the work of Demeas, an hitherto unknown chronicler, apparently of the first part of the third century B.C., who is said to have arranged the poems of Archilochus under the respective archons of Paros. The stone contained, also, citations from the poems of Archilochus, but most are too fragmentary for any certain restoration, though col. I, ll. 46-49 are read,

..... παῖς Πεισιστράτου
 ἄν[δ]ρα[ς ..] ὠνω...ας, αὐλὸν καὶ λύρην ἀνὴρ ἄγων
 εἰς Θάσον φ.σι | Θρήϊξεν δῶρ' ἔχων ἀκήρατον
 χρυσὸν, οἰκείψ(ς) | δὲ κέρδει ξὺν' ἐποίησαν κακά.

Near the beginning stands the story of the rescue of Coeranus by the grateful dolphin (Plut. *de soll. animal.* 36, pp. 984-985; Aelian, *Nat. anim.* VIII, 3; Athen. XIII, 606, d-f). The cave of Coeranus is identified with a grotto on the north-east coast of Paros, still called by the natives τὸ σπήλαιον τοῦ Ἀρχιλόχου.

PEIRAEUS.—The Walls and Harbors of Munychia.—In *Εφ. Ἀρχ.* 1900, pp. 91-102, J. Ch. Dragatses publishes an inscription found in an ancient quarry, discovered in March, 1900, near the theatre of Munychia. It is a law relating to the building of the walls of Peiraeus, and especially of Munychia, providing for the payment and management of the necessary funds, the quality and workmanship of the stones, etc. The date is the time of Lycurgus. To this period belongs the part of the wall now existing. The inscription helps to settle some details of the topography of Peiraeus. In *Πρακτικά* for 1899, pp. 37-39, Dragatses describes excavations at the harbors of Munychia and Zea, in 1899; and *ibid.* pp. 37-41, excavations at the harbors *Φανάρι* and *Πασσαλιμάνι*. Some details of the topography of the harbors were cleared up.

PLATAEAE. — Excavations. — In 1899, excavations were carried on at Plataeae by A. N. Skias, for the Greek Archaeological Society. The results were largely negative, but may be of value in future investigations. A few fragments of sculpture were found, among them part of a sarcophagus with a representation of the death of the children of Niobe. Among inscriptions was a large one on bronze, of late date. Pottery, from pre-Mycenaean times down, was found, showing that the citadel was settled very early. A marble head, from a relief of the early fifth century, and a fragment of a later relief, showing two hands each holding a staff, should also be mentioned.

RHODES. — Inscriptions. — *Athen. Mitth.* XXV, 1900, pp. 107–110, contains the continuation of the publication of Rhodian inscriptions, by F. Hiller von Gaertringen and Stylianos Saridakis (cf. *Athen. Mitth.* XXIII, 1899, pp. 390 f.; *Am. J. Arch.* III, 1899, p. 531). Three records of honors paid to various persons are published. No. 107 seems to show definitely the order of the documents in *I. G. Ins.* I, 155.

SAMOS. — Sculptures in the Museum. — Under the title ‘Antike Sculpturen in Samos’ (*Athen. Mitth.* XXV, 1900, pp. 145–214; pls. xii, xiii; 70 cuts; also published separately), Th. Wiegand publishes a catalogue of the sculpture in stone in the Pythagoras Gymnasium at Vathy, Samos. The collection was formed in 1895, and has grown so rapidly that a new building is planned. I. *Fragments of Archaic Figures.* Nos. 1–6. Noteworthy is an “Apollo” torso, with an old Ionian inscription, *Δεῦκλος ἀνέθηκεν τῷ Ἀπόλλωνι*; a small head, of *poros* stone, in style between the Samian head of the Acropolis and the Samian bronze from Olympia; a male torso, probably found near the Heraeum, and belonging to the latest archaic type, forming the transition to the “Apollo on the Omphalos.” II. *Figures of Divinities.* Nos. 7–24. Among them are statuettes of Artemis and Dionysus, in tolerably good preservation; a torso of Dionysus (?) which seems to be an original work of the fourth century; and a head of Aphrodite which suggests a type belonging to the school of Scopas. III. *Other Sculptures in the Round.* Nos. 25–42. Among these are a torso of a boy, of the fourth century; a Roman portrait, either of Augustus himself or some member of the Julian family; and the head of a youth, with a scowling expression, which recalls that of the Olympian pugilist. The style recalls the revival of archaic forms which is found in the head of Artemisia from the Mausoleum. IV. *Dedicatory Reliefs.* Nos. 43–54. Only 43 is remarkable. It is a fragment of a large (1.72 m. high) relief, representing apparently a victor adorned by Nike at the moment when he offers his prize to a seated figure, who must have been the Samian Hera. The relief is a brilliant example of Ionic art, as touched by Attic influence, at the end of the fifth century. V. *Funeral Feasts.* Nos. 55–87. These reliefs form a large part of the collection, and show little to distinguish them from the usual type. Some, however, have the ground of the relief filled with weapons, household utensils, or other articles, indicating sometimes the profession of the heroized dead—a peculiarity which seems to distinguish the Greeks of the East from those of the mainland. VI. *Grave-reliefs.* Nos. 88–105. Most are late Hellenistic or Roman examples. No. 88 represents a mourning youth seated on a rock, of the type referred by Usener (*Sintfluthsagen*, p. 217) to the idea of the Leucadian rocks. VII. *Decorative Sculpture.* Nos. 106–122. VIII. *Sarcophagi and Architectural Fragments.*

Nos. 123-133. No. 123 is an archaic sarcophagus, in the form of an Ionic temple, with two columns in low relief at each end, and three on each side. It seems to belong in the sixth century, and is the oldest example of the type of the sarcophagus of the mourning woman at Constantinople.

SUNIUM.—**The Sanctuary of Poseidon, the Temple of Athena, Inscriptions.**—In 'Εφ. 'Αρχ. 1900, pp. 113-150 (pls. v-ix; fig.), B. Staes publishes the results of his excavations at Sunium in 1897, 1898, and 1899 (cf. *Am. J. Arch.* 1899, p. 532). The temple of the fifth century, formerly called the temple of Athena, but now known to be that of Poseidon, stood on earlier foundations. The early temple had interior columns, but no trace of such columns in the later temple was found. Only one fragment of the frieze was discovered. The quadrangular peribolus of the temple was entered by propylaea consisting of two Doric porches, each with two columns. Beside the propylaea was a stoa 25 m. by 9 m., with six interior columns, extending to the corner of the peribolus. On the adjacent side of the peribolus was a narrow stoa, one-half the width of the first. These were probably built soon after the temple of the fifth century. About four hundred paces from the temple of Poseidon, on a hill toward the harbor, a temple was found, the peculiar plan of which recalled Vitruvius IV, 4. An inscription found in the temple previously known proved that that was the temple of Poseidon. The newly found temple was therefore that of Athena. It was 19 m. long by 15 m. wide, the cella being 16 m. long by 11.50 m. wide. It was entered from the east. The roof was supported by four interior Doric columns, and there was an exterior colonnade on the eastern and southern sides. Within, the western part of the cella, in which was the statue of the goddess, was separated from the rest by gratings. The foundations of the temple are poorly built, and the walls were probably of crude brick. The columns, of which hardly any fragments remain, were of local *poros* stone. The epistyles were of marble. The temple was surrounded by a peribolus, the wall of which is earlier than the fifth century B.C., as was probably also the temple. Six inscriptions are published. No. 1 is a decree in honor of Cephisodotus, son of Euarchides. He is mentioned also in an inscription of 330-329 B.C. (*C.I.A.* IV², 179^b, 51), which gives an approximate date for this inscription. It is provided that the stele with the inscription be set up in the temple of Poseidon, and the discovery of this inscription in the temple formerly regarded as that of Athena shows that it really belonged to Poseidon. The remaining inscriptions are also more or less fragmentary honorary decrees. In *Πρακτικά* for 1899, pp. 98-100, Staes gives a brief account of the work in 1899.

TEGEEA.—**Sculptures of the Temple of Athena Alea.**—The temple of Athena Alea at Tegea has been uncovered by the Greek Archaeological Society, and fragments of sculpture have been found, including a female head, a head of Heracles, and a head of a dog. As these sculptures are attributed to Scopas, the discovery is important. (*Ἀστυ*, November 22 = December 5, 1900.)

THEBES.—**Inscriptions on Bronze.**—In 'Εφ. 'Αρχ. 1900, pp. 107-110, K. Kourouniotes publishes inscriptions on fragments of *lebetes* from Boeotia. Both were bought at Thebes. The inscription on the first reads: *Δεμωθέρες ὑπάρὸν Ἀπόλλωνος Καρυκεῖο*. The god worshipped as *Καρυκεῖος* is seen to be Apollo. The second *lebes* has three inscriptions: (1) *ὑπάρὸν τῷ*

Πυθίο μισρόδιφος ἀνέθεκε; (2) ἐπὶ Ἐκπρόποι (from right to left); (3) τὸν ἐπ... The rough breathing on the first *lebes* is formed thus, Θ ; on the second thus, Ξ .

THERMON. — **The Temple and Other Structures.** — Ἐφ. Ἀρχ. 1900, No. 4 (pp. 161–212; pls. x, xi; 4 supplementary pls.; 11 figs.), is entirely devoted to an account of the excavations at Thermon (see *Am. J. Arch.* 1898, p. 115, 1899, p. 260) by G. Soteriades. The temple of Apollo, the foundations of which were first found, dates from the end of the third century. Traces of an earlier temple of the sixth century were found under the remains of the temple of the third century. Still lower were remains of two still earlier structures. At all times the temple was a wooden building. Roof tiles and antefixes of the sixth century and of an earlier date were found, and are discussed in detail. These early terra-cottas are of local manufacture, but the art of making reliefs in terra-cotta was derived from Corinth. The temple at Thermon from which the earliest of these terra-cottas are derived was one of the earliest temples now known. Its importance for the history of early Greek architecture is unparalleled, and the terra-cottas are of almost equal value for the history of early relief work. The excavations during the summer of 1899 are described in the *Πρακτικά* for 1899, pp. 57–66.

THERMOPYLAE. — **Excavations and Investigations.** — In 1899 P. Kastriotis undertook excavations at Thermopylae at the expense of the Greek Archaeological Society to look for the graves of Leonidas and his men. No trace of their graves was found, and careful reading of Herodotus shows that they must have been buried by the Persians, — therefore without any especial honors, — not by the Greeks. (P. KASTRIOTES, *Πρακτικά* for 1899, pp. 76–97; 2 plans.)

THESSALY. — **Inscriptions.** — In Ἐφ. Ἀρχ. 1900, pp. 51–74, G. D. Zekides publishes sixty-one inedited Thessalian inscriptions, chiefly from Larisa and the neighborhood. Most of them are short and late epitaphs. A few are dedicatory or votive inscriptions. No. 1 is a fragment of a decree of the Crannonians, in strongly Thessalian dialect, relating to setting up a column; No. 2 is a fragment of an honorary decree of the Crannonians. Several new proper names occur, as *Μενίτας*, *Βροχύς*, *Ἀρχαρέτα*, *Μνασαρέτα*, *Εὐνοτος*, *Πετθαλός*, *Τιμοκλέας*, *Θεμιστίων*, *Ἄρνας*, *Παντάγονος*, *Ἀστόφυλος*, *Ταδῖος*, and *Παγκλέας*. No. 18, *Εὐάνδρος Εὐάνδρου Βεροιαῖος ἐποίησε*(ι), gives a new artist's name of one of the first centuries after Christ. Some remarks are added, *ibid.* p. 91.

The Tumulus of Piláf-Tepé. — A peculiar tumulus in the vicinity of ancient Pherae, opened in 1899, was found to contain, beside the small urn-chamber of date about 150–100 B.C., the tomb of a ram, suggestive of the Phrixus legend and other mythology of the neighborhood. (C. D. EDMONDS, *J.H.S.* XX, 1900, pp. 20–25; pl.; 5 cuts.)

THURIA. — **A List of Names.** — In Ἐφ. Ἀρχ. 1900, pp. 151 f., Adolf Wilhelm publishes an inscription from Thuria, containing a list of thirty-eight names, each with the father's name.

VARIOUS MINOR DISCOVERIES. — *Athen. Mith.* XXV, 1900, pp. 117, 126, contains a series of notes from the following places: **Salonica**, a statue dedication; **Samothrace**, the lower part of the honorary inscription in Conze, *Reise auf den Inseln des thrakischen Meeres*, p. 66; **Daskalio**, near

Lesbos, columns and capitals, a sun-dial, a small grave stele, and some fragmentary inscriptions; **Dorylaeum**, a votive inscription; **Smyrna**, a statue dedication; **Sardis**, a very fragmentary honorary inscription; **Urganli**, between Cassaba and Sardis, the inscription from a tomb, containing the names of those for whom it was erected, and forbidding burial to any others; **Philadelphia**, nine inscriptions, — five from graves, two from statues, and two honorary; **Tralles**, an altar with *bucrania* and an inscription; **Karalar**, a relief of a nude athlete with a palm-branch and a ram beside him, and a laudatory inscription; **Alabanda**, a Roman grave-relief, with inscription; from the plain of the Cayster, two grave inscriptions. Several minor discoveries made at **Volos** at various times since 1884 are mentioned, *ibid.* pp. 116, 117. At **Leonidi** (Cynuria) a fragment of an Attic grave vase, with sculpture in relief, and part of the lid of a sarcophagus with a fragmentary inscription have been found. (*Ibid.* p. 114.) In the territory of the ancient **Andania** a mosaic of Roman times, representing a fight with wild beasts, has been found. A large peribolus is near this. Kavvadias thinks this may be the site of the *Karnasion*. (*Ibid.* p. 115.) Near **Lycosura** a stele with badly damaged inscription has been discovered. (*Ibid.* p. 115.) Near **Almyrus** a colossal bearded head has been found. The face is mutilated. A garment covers the head. The work is said to be archaic. (*Ibid.* p. 115.)

ITALY

ALSENO. — **The Terramara.** — Excavations during the past few years in the *terramara* Montata dell' Orto, near Alseno, prove that this station had the same peculiarities as those of the plain, — the encircling embankment and ditch, the *primigenius sulcus*, and, on one side of the settlement, an unoccupied area. (L. SCOTTI, *Not. Scavi*, 1900 pp. 118-127; 5 figs.)

ARDEA. — **Recent Excavations.** — In *Not. Scavi*, 1900, pp. 53-69 (11 figs.), A. Pasqui discusses the topography of ancient Ardea, describes and illustrates the primitive subterranean dwellings there existing, and gives the results of recent excavations in the necropolis.

BOSCO REALE. — **A Building with Frescoes.** — At Bosco Reale a large building of a period earlier than that of Pompeii has been found. The walls are covered with frescoes of great beauty, perfectly preserved. (*Chron. d. Arts*, October 20, 1900.) Twenty-four rooms have been opened. All are decorated with frescoes, which represent, for the most part, scenes of rural life, gymnastic contests, and the like. (*Ibid.* November 10.) The frescoes belong to the late republican period. Three pictures are especially noteworthy. One represents a lyre player twice as large as life, the second an old gladiator telling a woman his exploits, the third a woman in listening attitude. (*Berl. Phil. W.* November 17, 1900.)

CETONA AND CHIUSI. — **Anthropoid Vases.** — The contents of ten tombs found near Cetona and Chiusi, consisting of anthropoid ossuaries and other objects of native and foreign manufacture, dating between 800 B.C. and 500 B.C., are described by L. A. Milani in *Mon. Antichi*, IX, i, 1899, pp. 149-192; 49 cuts.

CHIUSI. — **Etruscan Tombs.** — Near Chiusi, two Etruscan tombs have been opened, containing inscribed sarcophagi and urns; among them, a finely carved marble urn, representing a temple. (G. F. GAMURRINI, *Not. Scavi*, 1900, pp. 215-217; 1 fig.)

CORNETO.—**Tombs.**—Near Corneto, in the district called Chiusa degli Archi, several tombs have been recently reopened, and objects neglected by former explorers have been found. Most noteworthy are fragments of inscribed cippi, an inscribed marble bust, and an inscription of some length painted on plaster on the wall of a tomb. (A. PASQUI, *Not. Scavi*, 1900, pp. 83-87; 1 fig.)

ESTE.—**Various Discoveries.**—In *Not. Scavi*, 1900, pp. 76-83 (2 figs.), A. Prosdocimi describes objects recently found at Este and neighboring towns, many of which have been placed in the museum at Este. He mentions particularly tombs,—pre-Roman and Roman,—sepulchral inscriptions, inscribed vases, and remains of Roman buildings. Two interesting bronzes have been found at Este,—a fibula in the shape of a horse and a grotesque statuette of a nude man.—At **Baone**, near Este, are sixteen sections of a stone pipe that formed a part of an ancient aqueduct. (*Ibid.* pp. 155-159; 3 figs.)

NOLA.—**Inscriptions, Sculpture, and Vases.**—In *Not. Scavi*, 1900, pp. 100-110 (4 figs.), G. Patroni describes the following objects found at Nola since 1894: sepulchral inscriptions, including one of doubtful reading, already published by De Petra in *Atti della Comm. di Terra di Lavoro*, 1896, p. 30; a marble torso, possibly of Augustus; a marble bust of Clodius Albinus; many vases, found in pre-Roman tombs, among them a small Attic amphora, with a picture of Cadmus and Athena. The vases represent two epochs; the first ends at the close of the sixth century, the second begins in the middle of the fifth century B.C.

PALESTRINA.—**Recent Discoveries.**—In *Not. Scavi*, 1900, pp. 89-95, A. Pasqui gives an account of explorations in the necropolis of Palestrina in the year 1898, adding a list of the objects found. The discovery of many votive offerings proves the existence of a shrine on a road which connected the Via Praenestina and the Via Labicana.

PANTELLERIA (COSSYRA).—**Ancient Remains.**—In *Mon. Antichi*, IX, ii, 1900, pp. 449-540 (8 pls.; 77 cuts), P. Orsi describes the tumuli (Sesi) and other relics of a prehistoric neolithic people in Pantelleria, the ancient Cossyra, with a sketch of the Africo-Mediterranean theory of migration. He also describes remains of the Phoenician-Roman period.

PASSERINA.—**Pliny's Villa.**—The site of Pliny's villa "in Tuscis" has been identified by Gamurrini with the locality called Passerina or Colle di Plinio, halfway between Città di Castello and S. Giustino. Here a votive inscription has been found put up by a Plinia Chreste, also mosaic pavements and great substructures, and fragments of statuary; above all several tiles inscribed with the name of the *dominus praedii*, C. P. C. S. (Caii Plinii Caecilii Secundi). (R. LANCIANI, *Athen.* December 8, 1900.)

PERUGIA.—**Etruscan Tombs.**—Several interesting Etruscan tombs have been found at Perugia. In one tomb of semicircular form with a rich doorway, the architrave of which was ornamented with bronze, was a sarcophagus with a black vase painted on the lid. On the lid were placed a comb of bronze and a necklace of about fifty gold plates. In the sarcophagus, with the bones of a woman, were a diadem of gold with ornaments in relief, ear-rings, bracelets, necklaces, and other objects of gold; a bronze vase, the handle of which is a graceful female figure; a candelabrum in the form of a winged woman, whose head and wings support a conical vase and

whose hands hold cups, while a sea horse is at her feet; and finally a mirror, upon which episodes of the legend of Venus and Adonis are engraved. (*Chron. d. Arts*, November 17, 1900; cf. WILLIAM MERCER, *Western Daily Press*, Bristol, England, October 30, 1900.)

POMPEII.—Excavations in the First Half of 1900.—Excavations at Pompeii are described by A. Sogliano in *Not. Scavi*, 1900. In February the excavations were continued south of the Basilica, and on the Barbatelli estate, north of the town. In the former place, a bronze statuette of Zeus-Serapis was found. The exploration of the drains was continued (pp. 70-72; 1 fig.). In March, work on the drains was continued, and also the excavation of Reg. V, Ins. IV. (pp. 98-100). In April the exploration of the drains was continued and the excavation of Reg. V, Ins. IV. (pp. 146-148). In *Not. Scavi*, 1900, pp. 199-203 (2 figs.), A. Sogliano describes two wall paintings in Reg. V, Ins. IV. One represents Mico and his daughter Pero in prison. These names are affixed to the figures. In a corner is an epigram of three distichs. The other picture represents the killing of Neoptolemus on the altar of Apollo at Delphi. In the excavation of Reg. V, Ins. IV, a utensil for heating liquids has been found, the nature and use of which are discussed by A. Sogliano in *Not. Scavi*, 1900, pp. 236-240. In the same article, the writer describes (plan) the two rooms situated at the northern extremity of the west portico of the Forum, which were cleared in June, 1900.

A Bronze Statue.—A bronze statue of a youth, 1.19 m. high, excellent work in the style of the fifth century B.C., is said to have been found November 28 in the group of buildings north of Pompeii, which probably means in the neighborhood of Bosco Reale. (*Berl. Phil. W.* December 22, 1900.)

ROME.—Discoveries in the Forum.—In *Athen.* December 29, 1900, R. Lanciani gives a connected account of the discoveries in the Forum, near the temple of Castor, prefaced by remarks on the disastrous floods in the early part of December. The account is here somewhat abbreviated.

The fountain of Juturna flows from the Palatine at the northern corner of the hill overlooking the Forum. After the Forum was drained, the water of the spring was gathered into a pool. The water could be drawn from a well or drunk at a fountain or *lacus* connected with the well. Both well and fountain have been found in good preservation. The well is nearest to the rock. On its fine marble puteal are two copies of the same inscription, *M(arcus) Barbatius Pollio aed(ilis) cur(ulis) Juturnai sacrum rest(ituit) puteal*. This magistrate became Quaestor of L. Antonius in 41 B.C., and propraetor and curule Aedile under Augustus. The puteal could be approached only from the north side, being in contact on the other with an aedicula or shrine ornamented with a diastyle front. On the architrave, supported by the two columns, the dedication IVTVRNAL · SA(er) was written with letters of gilt metal. The lower portion of a female marble statue has been found lying at the foot of the shrine, which seems to pertain to a figure of Minerva, altered in the third or fourth century into that of Juturna [cf. *Berl. Phil. W.* November 10, 1900]. In front of the puteal of M. Barbatius a marble altar has been found, the relief of which represents a young woman with a veil on her head and shoulders, turning to the left toward a man in warlike attire, to whom she offers her hand: probably Juturna taking leave

of her brother. Whether the shrine and well just described were architecturally connected with the fountain or *lacus* discovered 60 or 70 feet to the north, is as yet not determined. It seems that there are traces of a portico or covered passage between the two, supported by a colonnade on the street side, and giving access on the inner side to one or two halls, the walls of which contain niches for statuary. The *lacus* itself, which faces the east side of the temple of Castor, has the shape of a square basin or tank sunk deep in the ground so as to reach the low level of the spring. In the middle of the tank, which measures about 16 feet by 16, rises a square pedestal, on the top of which a marble altar has now been placed, which probably has no connection with it. The altar, an indifferent production of the second century after Christ, is covered with reliefs on the four sides, representing Jupiter shaking the thunderbolt; the Dioscuri, without the horses and with the stars of the morning and of the evening crowning their conical caps; Leda and the Swan; and Diana Lucifera.

This *ara* was found at the bottom of the fountain, having fallen in from the portico by which the fountain itself was covered and surrounded on three sides. In the same place were found many fragments of the figures of Castor and Pollux leading their horses to the sacred spring. The head of one of the horses is perfectly beautiful and well preserved, and I believe it (and the whole group) to be a genuine Greek work of the fourth century B.C. which once stood on the square pedestal in the middle of the pool. Over two hundred water-jugs have been recovered from its bottom, of the pattern and shape and make commonly used in Rome from the eighth to the eleventh century; and the ground near the edge of the basin was covered with fragments of glass bottles and goblets. I imagine that all through those centuries (the *Lacus Juturnae* disappeared after the pillage and fire of the Normans, 1084 A.D.) the spring was held in the same estimation in which the *Acqua Acetosa* and the *Acqua di S. Giorgio* are held in our day.

In *Athen*. September 13, 1900, Lanciani says that just south of the well are remains of a structure where many inscriptions mentioning *curatores aquarum* have been found. The main hall has niches for statues, considerable fragments of which were lying on the ground. The central niche seems to have been occupied by Aesculapius, the two side ones by Apollo and Hygeia. The Aesculapius is a good copy of a better original; the Apollo probably a copy from a bronze model.

An *aqueduct* of very early construction has been found in the Forum which is evidently earlier than that hitherto called the *cloaca maxima*. Perhaps the newly found aqueduct may really be the famous sewer of the time of the kings. (Cf. *Berl. Phil. W.* November 17, 1900.) New *rostra*, of *opus reticulatum*, have been found, which seem to be earlier than the semicircular structure near the arch of Severus. The newly discovered foundations may be those of the rostra moved by Julius Caesar to the middle of the Forum. The rostra previously known appear to date from the period between the Flavian emperors and Trajan. (*Chron. d. Arts*, November 24; *Berl. Phil. W.* December 1, 1900.) According to *La Tribuna*, October 28, 1900, the new foundations are at the side of the semicircular structure called the *Graecostasis*, near the point where the *miliarium aureum* was supposed to be, and belonged to a portico with small arches, each about 1 m. in height and breadth. This portico is the rostra of Caesar. The ships' beaks were built into the arches.

In *Not. Scavi*, 1900, pp. 143-146, L. Savignoni describes briefly the objects found under the *niger lapis* in the Roman Forum. The whole mass of votive and sacrificial material, representing a period from the seventh or sixth century to the first century B.C., was evidently deposited there at one time. G. Boni, *Not. Scavi*, 1900, pp. 159-191 (52 figs.), describes in detail the results of the recent excavation of the temple of **Vesta** — the various parts of the temple, the different periods represented, the newly discovered architectural fragments, and the remains of sacrifices and of votive offerings.

Various Discoveries. — The following minor discoveries have been made at Rome: On the Via Labicana, remains of ancient tombs and sepulchral inscriptions; in the mediaeval wall with which the ancient door of the Curia was closed, sculptured and inscribed fragments; under the Via di S. Francesco a Ripa, an ancient paved road. (G. GATTI, *Not. Scavi*, 1900, pp. 47-50.) On the Via Labicana, the wall of a tomb and sepulchral inscriptions; under the Via Anicia, an ancient road following the same direction as the modern one; in the same place, an inscribed fragment of a marble sarcophagus, from the Jewish cemetery of the Via Portuense; by the Via Prenestina, two female statues of good workmanship. (G. GATTI, *Not. Scavi*, 1900, pp. 87-89.) In *Not. Scavi*, 1900, pp. 192-194, G. Gatti gives several sepulchral inscriptions recently found in or near Rome. *Ibid.* pp. 230-231, he reports that in the restoration of the Church of St. Cecilia, a Greek inscription and several brick stamps have come to light. Underneath the Scala Santa, besides a tufa wall of republican period, various mediaeval remains have come to light. (O. MARUCCHI, *Not. Scavi*, 1900, pp. 217-219.)

Relief Map of the Forum. — In *Not. Scavi*, 1900, pp. 220-229 (plan; 6 figs.), G. Boni explains the construction of a relief map of the area between the Colosseum and the Tabularium, recently made by the *R. Scuola d' applicazione degli ingegneri di Roma*. With the article are a plan, showing elevations, and six reproductions of photographs taken from a balloon.

SICILY. — **Various Discoveries.** — The very scanty architectural and ceramic remains of ancient **Camarina**, with the surrounding cemeteries, dating from about 600 to 200 B.C., are published by P. Orsi in *Mon. Antichi*, IX, i, 1899, pp. 201-278; 72 cuts. In *Not. Scavi*, 1900, pp. 245-248, P. Orsi gives a brief summary of the results of a three months' campaign at **Gela**. Besides excavating 494 tombs of the necropolis and finding numerous sarcophagi and vases, he explored the surrounding country, which is rich in antiquities. At **Lentini**, P. Orsi has opened a number of Sicel and Greek graves. The former yielded many vases, some of local manufacture, others imported, all of which are described in *Röm. Mith.* 1900, pp. 62-98 (39 figs.). This necropolis was not used after the beginning of the seventh century B.C. The Greek necropolis is composed of three groups of tombs. The first, in the *Predio Pisano*, was explored in 1884, and many objects of gold, silver, bronze, etc., were found, including a bronze basin, decorated with rams' heads. These tombs are of the seventh and sixth centuries B.C. The second, in the district *La Maddalena* recently excavated, was unproductive, but vase fragments show that it was in use before the fifth century B.C. The third, the necropolis of *Piscitello*, also recently excavated, contained many vases, especially lecythi, indicating that it was in use from slightly before 500 to slightly after 400 B.C. In *B. Paletn. It.* 1900, pp. 164-174 (pl.; fig.), P. Orsi calls attention to collections of bronzes, chiefly arms, found buried

in Sicily, and describes a number of such objects found in 1898 at **Modica**, near Syracuse. In *Mon. Antichi*, IX, i, 1899, pp. 33-146 (11 pls.; 52 cuts), P. Orsi describes the remains of a palace and of two very extensive mountain cemeteries of rock-cut tombs at **Pantalica** and **Cassibile**, in southeastern Sicily, belonging to the pre-Hellenic Siculan civilization, about 1400 to 800 B.C., and showing a continuous development through the first three periods of the island, with slight foreign influences. A Greek inscription on a terra-cotta vase of the sixth or early fifth century B.C. has been found near **Selinunte**. (*Not. Scavi*, 1900, pp. 112-113; 2 figs.)

At **Syracuse**, in the region called *Achradina*, two boys found a little treasure of silver coins, which was quickly divided and scattered. Orsi was able to examine 128 pieces out of at least 400 which had composed the hoard. These presented the following types: 3, Alexander the Great (posthumous issues, 250-200 B.C.); 9, Antigonus Gonatas (277-239 B.C.); 136, Philistis of Syracuse (pieces of 16 *litrae* and 5 *litrae*, in many varieties); and 14, Hieronymus (of ten *litrae*). Orsi thinks it likely that the hoard was hidden when the Romans took Syracuse in 212 B.C., when *Achradina* "*diripienda militi data est.*" (Livy XXV, 31.) A second hoard, found near **Licata**, contained about 190 silver coins of Carthage, with head of Persephone and horse (Head, p. 740), of the period 241-218 B.C.; and probably was brought into Sicily between 213 and 210 B.C., when the Carthaginians were carrying on extensive operations in the south of the island. (P. Orsi, *R. Num. Ital.* 1900, p. 85.) At **Syracuse**, on the *Achradina*, a portion of an ancient gymnasium has been excavated. In January and February, 1900, the excavation of the prehistoric village of **Matrensa** was continued, and the natural grottoes of **Scala Greca** were explored; two of these were used as sanctuaries. It has been proved by the discovery of two inscriptions that the heretics and Jews of Syracuse, of the period from Constantine to Gregory, had catacombs of their own in the region of S. Giuliano. Tombs of the transition between the first and second periods have been excavated at S. Paolo in Solarino. (P. Orsi, *Not. Scavi*, 1900, pp. 207-211.) A collection of Sicilian coins has been found near **Termini Imerese**. (*Not. Scavi*, 1900, pp. 205-206.)

SPOLETUM. — **Inscriptions.** — In *Not. Scavi*, 1900, pp. 130-141, G. Sordini publishes thirty-seven inscriptions of Spoleto and its neighborhood. Some of these have been published before, but not from the originals.

VELLETRI. — **The Via Appia.** — Between Velletri and Cisterna, on or near the site of the ruined church S. Andrea in Silice, excavation has brought to light the pavement of the Via Appia, portions of the church, which seems to have been at least partly built of ancient materials, and a fragment of a marble frieze, representing men on horseback. (O. NARDINI, *Not. Scavi*, 1900, pp. 195-198; 2 figs.)

VARIOUS MINOR DISCOVERIES. — The following minor discoveries are described in *Not. Scavi*, 1900. Near **Amiternum**, a Roman necropolis has been found, containing architectural fragments and several inscriptions (pp. 149-151). Five sepulchral inscriptions from **Brindisi** are published by G. Nervegna (p. 153). H. De Nino describes various fragmentary inscriptions, remains of aqueducts and other Roman structures at **Casoli** (pp. 242-244). Remains of the ancient forum of **Habicum** have been found at **Colonna** (pp. 50-51). G. De Petra reports the discovery of a hoard of

167 silver republican coins at **Crognaleto** (pp. 43-46). E. Gabrici describes the remains of a *laconicum*, or *assa sudatio*, and a *columbarium* in the Villa del Balzo at **Naples**. In the columbarium a sarcophagus was found, with a third century relief, representing the Muses (pp. 235-236; fig.). Fragments, possibly of an ancient temple, have come to light at **Raiano** (p. 272). A milestone of the road from Eporedia to Augusta Salassorum has been found at **Settimo Vittone** (pp. 41-42). Remains of a Roman villa (p. 52) and a fine mosaic pavement, perfectly preserved (pp. 96-97), have been found near **Velletri**. T. Ashby (*Rend. Acc. Lincei*, 1900, pp. 217-219; fig.), reports that on the **Via Prenestina** an inscribed stone has been found, which may be the thirteenth milestone of the ancient road, or, possibly, a *cippus* of the aqueduct of Gabii.

SPAIN

THREE PRIMITIVE CITIES.—In the province of Albacete, at Los Castillares, Los Altos de Garcelen, and Las Grajas, remains of three ancient Iberian settlements have been found. The first was a stronghold, with fortifications of great stones. The others were cities of some size. The houses, especially at Las Grajas, were of several rooms and considerable size. Some pieces of Iberian pottery and a few other objects were found. (PIERRE WALTZ, *Revue des Études Anciennes*, 1900, pp. 346-353; 3 figs.)

BAÑEZA.—**Hylas and the Nymphs.**—At the July meeting of the Berlin Arch. Gesellsch., R. Engelmann showed in photograph and discussed a mosaic of Hylas and the nymphs, found near Bañeza in Spain, which resembles that in the Palazzo Albani in the grouping and accessories. (*Arch. Anz.* 1900, 3, p. 153; fig.)

BARCELONA.—**An Iberian Bronze Bull.**—In the *Revue des Études Anciennes*, 1900, pp. 354-358 (pl. iv), Pierre Paris publishes and discusses a rude bronze statuette of a couchant bull in the museum of Santa Agueda, at Barcelona. The work is rude, but shows the influence of Oriental art upon the early Iberians. The effect of "Mycenaean" art is also noticeable.

FRANCE

FINDS OF ANCIENT COINS.—Several discoveries are registered by Adr. Blanchet in *R. Num.* 1900, p. 104: (1) At **Saint-Étienne des Landes** (Dordogne), an earthen vase containing over eight hundred Gallic coins of silver of the usual types struck by the Gallic peoples of the Garonne valley. (2) Near **Verdes** (Loir-et-Cher), not far from the newly discovered remains of a Roman road, a vase with between four thousand and five thousand small bronze coins of the Tetrici, father and son. (3) At **Angicourt** (Oise), in an amphora, fifty-four hundred *sestertii* and *asses*, ranging from Galba to Postumus, in whose reign the hoard was probably buried.

In the same journal (p. 106), J. Creusot records two other discoveries: (1) At **Rivarenne**, on the Roman road between Argenton and Poitiers, charcoal burners found a hole covered with a slab of stone. Herein lay eight hundred Roman silver coins, all in a perfect state of preservation, representing the reigns of Trajan, Hadrian, Faustina Senior, M. Aurelius, L. Verus, Commodus, Severus, Caracalla, and Severus Alexander. (2) At a small village not far from **Châteauroux**, in the débris of a sand-pit, a number of coins have been found, partly Gallic (Turones, Bituriges, Lingones, and Aedui), partly Roman (Tiberius to Valentian II).

AUTUN.—**Mercury Pantheus.**—In *R. Arch.* XXXVII, 1900, pp. 220-237 (pl. xii; 3 figs.), Henri Graillet publishes and discusses a bronze statuette of Mercury Pantheus at Autun. It was found about 20 km. from Autun, in 1896, together with several other objects of Roman date. The god is nude, but wears a pointed headdress, made of the head of a dog or wolf. Small wings are seen on his head. He has also large wings extending up from his shoulders. The points of these wings are connected by a crescent. In his left hand he holds a cornucopia. The right hand and both feet are gone. On the wings, the crescent, the cornucopia, and the fruits and flowers projecting from it are numerous busts of deities, some of which, as Mars and Venus, are recognizable. Other representations of gods or goddesses with the busts or attributes of other deities are enumerated and classified. Votive objects with similar accessories are also mentioned, and three are published. Such representations and objects have something of the character of amulets, serving to propitiate many gods at once.

CHOUSSY.—**Bronze Relics.**—In *R. Arch.* XXXVII, 1900, pp. 125-127 (4 figs.), Abbé Breuil publishes fragments of a casque and a vase of bronze found with various other objects at Choussy (Loir-et-Cher), probably after 1889.

PARIS.—**Cameos and Intaglios.**—Baron de Baye has given the Cabinet des Médailles eight engraved stones from Transcaucasia. One is a cameo with three heads (Jupiter and two goddesses?) and an eagle. The others are intaglios, representing Fortuna, Venus, a lion, a stag, a capricorn, and a butterfly. These are imitations of Graeco-Roman types executed in the Orient in the first centuries after Christ. Among the acquisitions of the Cabinet des Médailles is a magnificent head of Lucius Verus in relief on white agate. This cameo was found last year in Egypt, and is a fine specimen of Roman work of the second century after Christ. (*Chron. d. Arts*, August 11, 1900.)

Acquisitions of the Louvre in 1899.—In *Arch. Anz.* 1900, 3, pp. 155-160, is a list of the acquisitions of the Louvre in the department of Greek and Roman antiquities, for the year 1899. It comprises objects in marble and stone (102 Nos.), bronze (84), precious metals and stones (14), glass, terra-cotta, ivory, lead, etc. (129). Noteworthy are a collection of terra-cotta flasks with Christian devices from Smyrna, and one of painted plaster relief busts from sarcophagi from Upper Egypt.

GERMANY

EXCAVATIONS IN THE PALATINATE.—The following excavations are described by C. Mehlis, *Berl. Phil. W.* December 15, 1900: (1) At **Grosser Stiefel**, near St. Ingbert, are remains of a fortified building. This was found to be mediaeval, but the materials used were derived in part from a late Roman villa. In a small Roman villa called "Schlangenthal" similar materials were found. (2) At **Etschkopf** or **Handschuhkopf**, near Kaltenbach, a terrace wall was investigated. It is prehistoric, and doubtless served as a *refugium*. (3) At **Heidenschuh**, near the Klingenmünster insane asylum, is a double wall 63 m. and 81 m. long, built of unhewn stones without mortar. (4) At **Walastede** a Merovingian castle of the seventh or eighth century is being investigated. Much pottery and many other objects have been found. (5) At **Kirrweiler**, Bann Lachen, Bezirkstadt Neustadt a. d. H., a Roman villa has been examined. It is of considerable

size. The inner walls were red, with borders of blue and green stripes. Many fragments of terra-cottas, vases, etc., were found.

DISCOVERIES IN THE RHINELAND.—Excavation at **Asberg** has brought to light remains of the wall and gates of the Roman camp at **Asciburgium**. Below these are traces of an earlier fortification, probably built by **Drusus**. An aqueduct has been found, the ancient harbor located, and the whole neighborhood explored for evidence of Roman occupation. (**H. BOSCHHEIDGEN**, *Jb. V. Alt. Rh.* 1899, pp. 136–163; 1 pl.; 23 figs.) **G. Mestwerdt** publishes in *Jb. V. Alt. Rh.* 1899, pp. 112–116, a list of inscriptions on ancient vases in the municipal collection at **Kleve**. Traces of an ancient fortification have been found on a hill near **Münstereifel**. (**CONSTANTIN SCHULTEIS**, *Jb. V. Alt. Rh.* 1899, pp. 65–66; 2 pls.) Vases found in a late Roman necropolis at **Reims** are described in *Jb. V. Alt. Rh.* 1899, pp. 186–188 (11 figs.). *Ibid.* p. 188, the discovery is reported of a Roman bathing establishment and a pottery at **Bertrich**. The following discoveries are reported by **Hans Lehner** in *Jb. V. Alt. Rh.* 1899, pp. 164–174 (7 figs.): At **Cobern**, graves of the bronze age and Roman structures of the second and third centuries. At **Coblenz**, four milestones, two of them inscribed, of the years 97 A.D. and 98 A.D. In the **Coblenz Stadtwald** remains of Roman buildings, graves, and a temple dedicated to Mercury and the Gallic **Rosmerta**. At **Andernach**, a Roman hypocaust, and nearby, on the **Krahenberg**, remains of a pre-Roman house. At **Efferen**, near Cologne a vaulted chamber tomb, containing two sarcophagi.

REPORT OF THE REICHSLIMESKOMMISSION FOR 1899.—The eighth year of the Commission for investigating the frontier defences of the Roman Empire between the Danube and the Rhine brings the work near completion. Thorough study of the position and character of the various constructions and of the objects found among them has made it possible to trace with tolerable certainty the successive stages of the boundary line, from Domitian's first campaign against the Chatti, in 83 A.D., to the final abandonment of the territory beyond the two rivers. (**E. FABRICIUS**, **F. HETTNER**, **VON SARWEY**, *Arch. Anz.* 1900, 2, pp. 79–99; 1 cut.)

BERLIN.—**Acquisitions of Utensils and Coins.**—The antiquarium of the Museum has acquired some seventy objects of glass, ivory, clay, and bronze from **Bosco Reale**, in part from the villa in which the silver vessels now in the Louvre were found, in part from a neighboring villa. Of the bronzes, a crater with a separate foot (in all 0.65 m. high), several buckets, vases with handles, and a shell-shaped vessel are of artistic value. Other objects show the utensils of a wealthy Pompeian house. The bronze fittings of a bed, richly adorned with silver, two candelabra, a lamp-stand with a lamp and a lantern, deserve mention. A shallow dish of *terra sigillata* and a glazed goblet are among the best terra-cottas. The "Münzkabinett" has acquired the collection of coins of **Imhoof-Blumer**, consisting of 22,041 coins, of which 292 are of gold or electrum, 7019 of silver or potin, 14,728 of bronze or copper, 2 of lead. (*Berl. Phil. W.* October 27, 1900.)

NEUSTADT A. D. H.—**Necropolis of the Hallstatt Period.**—In the **Benzenloch**, near Neustadt, is a group of twelve tumuli. Six of these were examined in the spring of 1900. Some showed incineration, others inhumation. Skeletons, bronzes, and other objects were found. Evidently the tombs for inhumation belong to the earlier Hallstatt period (800 B.C.

to 600 B.C.), while those showing incineration belong to the next period (600 B.C. to 400 B.C.). Both groups belong, however, to the same tribe, the Nemetes. (C. MEHLIS, *Berl. Phil. W.* October 13, 1900.)

STOCKSTADT.—**Roman Fortifications.**—The sites of six Roman forts in the region near the Main have been determined by the Limeskommission. Of exceptional interest are the river fortifications laid bare at Stockstadt, not only because they are unique of their kind in Germany, but also because their position proves that the Main must have followed a more westerly course during the Roman period than it does now. (*Athen.* December 1, 1900.)

AUSTRIA-HUNGARY

APULUM.—**Inscriptions and Marbles.**—In *Jh. Oesterr. Arch. I.* III, 1900, Beiblatt, pp. 179-193 (3 cuts, 21 figs.), J. Jung reports some inscriptions and other marbles from Apulum. The inscriptions are taken from Albert Cserni's previous publication in the *Jahrb. des historisch-archaeologischen Vereins in Karlsburg*, 1897, pp. 46 ff. They are dedicatory, but yield some information in regard to the Roman legions. Among the marbles are included the statue of a Roman, much mutilated and of little value, and a small replica of the type of the Apollo Belvedere.

CARNUNTUM.—**An Ancient Bakery.**—In the neighborhood of the ancient magazine of arms which was discovered last year at Carnuntum, an ancient bakery has now been discovered. The room contained two baking ovens, and amongst other articles "a row of charred, but nevertheless completely preserved bread loaves." The flat, cake-shaped loaves had a diameter of 29 to 32 cm. Ancient bread hitherto had only been known from Pompeii. (*Athen.* October 20, 1900.)

NEDINUM AND PODGRAZJE.—**Various Discoveries.**—In *Jh. Oesterr. Arch. I.* III, 1900, Beiblatt, pp. 212-218 (16 figs.), J. von Bersa publishes some votive and sepulchral inscriptions, an architectural fragment, and a bronze lamp-figure. Most of these were found between Zara and Benkovac in Dalmatia at the ancient Nedinum, and at Podgrazje. The bronze is in the museum of S. Donato.

POLA AND BRIONI.—**Various Discoveries.**—In *Jh. Oesterr. Arch. I.* III, 1900, Beiblatt, pp. 193-204 (4 figs.), R. Weisshäupl publishes some discoveries from Pola and Brioni in South Istria. This is a further account of excavations noticed in the *Beiblatt* for 1898, pp. 97 ff., and 1899, pp. 80 ff. In the former place, the excavation of some houses and the finding of a street are reported. A few small objects of domestic character were also found. At Brioni, on the east side of the island, in the Val Catena, a caldarium and hypocaust have been excavated.

SALONA.—**A Dionysus and an Aphrodite.**—In *Jh. Oesterr. Arch. I.* III, 1900, Beiblatt, pp. 203-208 (2 figs.), F. Bulić and R. v. Schneider publish a statuette and a statue from Salona which are now in the museum at Spalato. The statuette is a Dionysus of late type, the statue a torso of Aphrodite (Medicean type). A small figure of Eros looking up is attached to the support on the left of the statue. This was discovered in 1838 and was published in the *Denkschriften der Wiener Akademie*, VII, 38, Taf. 4. It is not in Reinach's *Répertoire*.

THE BOUNDARY OF DACIA.—In *Jh. Oesterr. Arch. I.* III, 1900, Beiblatt, pp. 219-220, a short summary is given of the investigations of

Major Josef Ornstein into the western boundary of Dacia. These are published in the *Jahrb. des Vereines des Szolnok. Dobokaer Comitâtes für Literatur, Geschichte und Ethnographie*, I, 1900.

BULGARIA

KARA-AGATCH.—A "Thracian Horseman."—In *C. R. Acad. Insc.* 1900, pp. 362-365 (pl.), is a letter from A. Degrand describing a statue found at Kara-Agatch, near Philippopolis. A mounted, bearded man, clad in a tunic and floating chlamys, and wearing high shoes, is preparing to strike (probably with a lance) a lion, only the front part of which is seen. The lion has pulled down a bull. A panther skin is spread upon the back of the horse upon which the rider sits. The work, probably of Roman times, is poor. The right side is much better finished than the left. Reliefs of the "Thracian Horseman" are not rare, but this is the first statue discovered. The person here represented is probably a heroized mortal regarded as a companion of the great Thracian god.

ROMAN ANTIQUITIES IN BULGARIA.—In *R. Arch.* XXXVI, 1900, pp. 414-424 (fig.), A. Merlin publishes eight inscriptions from Bulgaria. All but one are Latin. One, from Lom (Almus), reads: *Nemesi Aug(ustae), pro s(alute) Imp(eratoris) Ma[xim]ini? or Macrini? Aug(usti) Caesidius Amandus b(ene)f(iciarius) c(iri) c(larissimi) co(n)s(ularis) c(otum) p(osuit)*. One is a dedication to Jupiter Optimus Maximus Dolichenus, for the welfare of Caracalla. One, in Greek, from Oescus, is a heading of a decree in honor of Fl. Pompeius Montanus. The others are from tombstones, except one, from Berkowitza, which reads: *Silvāna . et | Silvestri s. Iuli(anus) . cum(?) me [. . ?]*. This is cut between two figures in relief, representing Silvanus with his dog, his pine branch and his pruning knife, and a long-robed female figure, Silvestris. Elsewhere Silvanus is accompanied by three long-robed nymphs, sometimes called Silvanae. (Cf. *C.I.L.* III, 10,460.)

SERVIA

NISH.—A Head of Trajan.—At Nish, in Servia (the ancient Naissus, the birthplace of Constantine), workmen unearthed the head of a bronze statue, which showed traces of gilding, together with a gold pin and a star in which jewels had been set. The bronze bust was immediately sent to the Servian National Museum at Belgrade, where the Servian archaeologist, Dr. Wittowic, declared it to represent the Emperor Trajan. (*Athen.* October 6, 1900.)

GREAT BRITAIN

ROMAN BRITAIN IN 1900.—In *Athen.* January 5, 1901, F. Haverfield gives an account of discoveries of Roman antiquities in Great Britain in 1900. At **Silchester** the neighborhood of the north gate has been examined, and progress has been made toward excavating the entire area. Some iron tools were found in one well and a wooden ladder in another. At **Caerwent** some interesting buildings have been explored and two inscribed fragments found. From different places five Roman villas are reported. At **Richborough** the Roman fort has been reexamined. The concrete platform in the centre may have been the foundation of a great trophy or tower. At **Cardiff Castle**, in Wales, it appears that there were Roman walls of two dates. Another Roman fort has been found at **Gelligaer**, 14 miles north

of Cardiff. At **Chesters**, in the valley of the North Tyne, it appears that there were two successive Roman bridges of different dates and that there was a wall of turf succeeded by the stone wall, as at Birdoswald. Perhaps Hadrian built one, and Severus the other. The camp at **Lyne**, near Peebles, is now seen to have been a Roman fort. Remarks on Roman roads in Wales and Scotland are added.

CARDIFF. — Roman Coins. — A laborer at work on the Sully Moors, near Cardiff, October 17, 1899, turned up an old metal vessel containing many Roman coins and several gold rings. Part of the hoard was quickly scattered, but a total of 7 gold and 301 silver coins and 4 gold rings was secured and sent to the British Museum for examination. Mr. H. A. Grueber gives a detailed and critical description of the hoard in *Num. Chron.* 1900, pp. 27-65. The coins belong to two groups: the first consisting of silver *denarii* and *Antoniniani* of twenty-nine reigns, from M. Aurelius (180 A.D.) to Postumus (ca. 267 A.D.); and the second, of gold coins of Diocletian and Maximian (286-306 A.D.), with one silver *denarius* of Carausius (287 A.D.). It is evident that the hoard was buried shortly after 306 A.D. The silver coinage of Carausius, who set up an independent sovereignty in Britain under Maximian, is strangely in contrast with the base metal put forth in the rest of the Empire. Observing that all the silver of Carausius bears the mint mark RSR (for which he suggests the explanation, *Rutupiae stativa*, or *statio, Romana*), and recalling the fact that the Germans, and probably the other barbarians on the outskirts of the Empire, would not accept the debased Roman money of the period, requiring instead the older and purer coins, Mr. Grueber supposes that these silver *denarii* were a purely military coinage struck in the important garrison-town of Rutupiae (Richborough), — headquarters at this time of the *Legio IIII Fulminata* (not *Fulvia*, as he mistakenly completes the name), — and intended to pass in currency with the older *denarii* still in circulation both in Britain and along the Rhine. The coins of the hoard are in fine preservation, and include some hitherto unpublished types, among them a splendid unique double-aureus ("medallion") of Diocletian, commemorating the last Roman triumph in history — that of the year 303.

CHESTER. — Roman Remains. — At a meeting of the British Archaeological Association, November 7, 1900, Mr. Robert Newstead lectured on recent discoveries at Chester. Numerous remains of walls have been found off Eastgate Street, one of which, belonging to a semicircular structure, had three coats of different grades of plaster. A slip of bronze has the inscription VTERE FELIX. Several drains have been found, one of which is inscribed: IMP. VESP. VIII. T. IMP. VII. COSCN. IVLIO AGRICOLA LEG. AVG. PR. PR. The date is said by Mr. Haverfield to be 79 A.D. (*Athen.* November 17, 1900.) In *Reliq.* 1901, pp. 45-51 (5 figs.), Mr. Newstead describes lead pipes, pottery, sandals, antefixes, etc., found at Chester.

HARLYN BAY. — A Neolithic Cemetery. — In *Athen.* September 22, 1900, James Baker describes a neolithic cemetery accidentally discovered at Harlyn Bay, Cornwall. Some fifty graves have been found, with cists of slate. Few stone implements were found, nor no pottery.

STOCKTON HEATH. — A Roman Potter's Kiln. — In *Reliq.* 1900, pp. 263-269 (4 figs.), Thomas May describes a Roman potter's kiln found in 1898 at Stockton Heath, near Warrington. Remains of Roman fortifica-

tions were also found at this place. Numerous vases and fragments were found, but none with names inscribed upon them. In the writer's possession and in the Warrington Museum are, however, inscribed fragments of vessels resembling those found at Stockton Heath, and several inscriptions, BRVCI, BRICOS, BRVCVS, FECIT, BRC, and FE are published.

AFRICA

RECENT ARCHAEOLOGICAL WORK IN NORTH AFRICA.—

In *Arch. Anz.* 1900, 2, pp. 62-79 (3 cuts), A. Schulten gives from his own inspection and from a mass of published material an account of the newer discoveries in Tunis and Algeria. Among the points noted are the extent and character of the Roman occupation of the country, with traces of the African *limes*; the independence and accurate study of nature shown in the African mosaics, from which many details of local life are gleaned; the survival of ancient forms in Arabic use to-day, not only in architecture, burial, etc., but in weaving, jewellery, and pottery, the last perhaps showing Greek influence from Cyrene; the unchanged character of Berber civilization, in spite of a temporary Roman or Punic surface-culture; the secret practice of pagan worship in the early Christian period; the pagan origin of certain Christian symbols; the probable origin of the Phoenician pyramid-topped mausoleum from the stelae or cippi of that form placed above shaft-graves. Besides mosaics and the sculptures at Cherchel, the Roman military reliefs of native troops, the tomb of the Mauretanian kings near Tipasa, the Colosseum at Thysdrus, and a remarkable rock-scratched picture of lions, probably Libyan, are most interesting.

CARTHAGE.—Excavations at St. Monica.—In *C. R. Acad. Insc.* 1900, pp. 488-511 (1 pl.; 13 figs.), A. L. Delattre gives a report of his excavations in the Punic necropolis near the hill of St. Monica, Carthage, for the first six months of the year. Painted terra-cottas, censers in the form of heads of goddesses, figurines of women, bronze razors with Punic inscriptions and engraved representations of human beings, birds, etc., in Egyptian or Egyptizing style, amulets of all sorts in gold, silver, and ivory, and vases in the forms of birds and beasts are the most important and interesting objects found in the many tombs opened.

The Odeum.—P. Gauckler has discovered the Odeum, which was built by the proconsul Vigellius Saturninus, and is mentioned by Tertullian. It has a semicircular form, and was evidently furnished with extraordinary luxury and splendor. It was destroyed by the Vandals. Dr. Gauckler has traced the whole architectonic ornamentation of the stage, the Corinthian columns, cornice-mouldings overladen with ornaments, and inscriptions which leave no doubt as to the character and use of the building. There are also several statues of Parian marble of Graeco-Roman origin, bearing indications of coloring, portrait busts of the Caesars, two busts of Faustinus, and a statue of Hadrian in heroic costume. The whole of the sculpture has been sent to the museum of Bardo. (*Athen.* December 8, 1900.)

Engraved Metal Plates.—In *C. R. Acad. Insc.* 1900, pp. 176-203 (2 pls.; 3 figs.), P. Gauckler describes discoveries at Carthage, especially some thin plates of gold and silver rolled up in little cylindrical gold cases intended to be hung round the neck. These cases are surmounted by a head of a lioness or a cat with an uraeus and solar disk. On being unrolled, the plates were

found to be covered with mythological and funerary scenes finely engraved. Similar rolls found in Sardinia are described, and one in Cagliari is published. The engraving is Egyptian in style, but with Oriental peculiarities. Undoubtedly the work is Phoenician or Carthaginian. Two of the rolls have inscriptions; one is read by Ph. Berger (pp. 203-207), "Protect and guard Hilleçbaal, son of Arisatbaal." These and various other objects were found in tombs of the seventh and sixth centuries B.C. The tombs and many objects found in them are briefly described.

DOUGGA (THUGGA).—Excavations.—A member of the French School in Rome, Mr. Homo, has excavated at Dougga, in Tunisia. The Capitoline temple was situated in a large paved court, flanked on two sides at least by a colonnade. An *exedra* was at the south of this court. The pavement of the part of the court in which the temple and the *exedra* stood is of mosaic. A second open square with mosaic pavement is at a lower level than the first, with which it is connected by stairs. Still lower is a third court, separated from the second by a colonnade. The whole may be the forum of Thugga. Several fragments of inscriptions, fragments of a frieze representing a sacrifice, a headless draped statue, and a bronze statuette of a satyr were found. The *Mél. Arch. Hist.* will contain a detailed publication. (*C. R. Acad. Insc.* 1900, pp. 388-395; plan.)

KSAR-GHELÂNE.—A Roman Castellum.—The French Lieutenant Gombeaud has excavated the *castellum* at Ksar-Ghelâne, in the Sahara. The ancient name of the place is found to be Tisavar. The Roman fortification belongs to the second century after Christ. Several inscriptions and other objects of interest were found, including a well-preserved bronze vase representing the head of a laughing child. (*P. GAUCKLER, C. R. Acad. Insc.* 1900, pp. 541-547; cf. *B. Arch. C. T.* July, 1900, p. ix, and *Berl. Phil. W.* December 8, 1900, where the modern name of the place is given as Elf-Hagneuf.)

SAINT-LEU (PORTUS MAGNUS).—A Relief, Representing Epona.—In *R. Arch.* XXXVII, 1900, pp. 260-261 (fig.), S. Gsell publishes a relief found two years before at Saint-Leu. Epona is seated, holding in one hand what seems to be a cornucopia, in the other a patera. At one side is a horse, at the other apparently a mule. At each side of her head is a flower. The work is rude, but the relief is interesting, being the first representation of Epona found in Africa.

SOUKRA.—A Punic Grave.—At Soukra, about halfway between Tunis and Carthage, Count Kerembriec has found a Punic grave, with intact brick sarcophagus. At the foot of the skeleton were a lamp, a plate, objects of glass, nails, etc. A Punic necropolis was probably here. (*Berl. Phil. W.* December 8, 1900.)

UNITED STATES

BOSTON.—Forged Tanagra Figurines.—In the *Boston Transcript*, November 26, 1900, Edward Robinson, curator of classical antiquities in the Museum of Fine Arts, announces that twenty-five out of twenty-eight beautiful figurines, twenty-three of which were given to the Museum by the late Thomas J. Appleton, in 1879, are forgeries. They contain many ancient fragments cleverly pieced together and supplemented with plaster and paint. In some cases the greater part of the figure is modern, in others the ancient

parts are more considerable. As these figurines came from a dealer of high standing, they had not been so carefully examined as later acquisitions.

BROOKLYN. — Greek Coins. — A series of articles is contributed by Frank Sherman Benson to *Am. J. Num.*, beginning with No. 167 (Vol. XXXIV, No. 3), descriptive of his collection of ancient Greek coins now preserved as a loan in the Museum of the Brooklyn Institute of Arts and Sciences. The articles are cursory and general in their nature and without claim to originality, but well illustrated; and the coins treated are fine and representative types.

NEW HAVEN. — Egyptian Antiquities at Yale University. — The Peabody Museum of Yale has just received the Egyptian collection obtained at Abydos by the Egypt Exploration Fund Association. It contains an inscription from a royal tomb of the first dynasty, alabaster vases of the Rameses period, a chair-leg of wood fitted with ivory pegs, scarabs, gold ornaments, and other relics. (*Public Opinion*, November 29, 1900.)

EGYPTIAN ART IN AMERICAN MUSEUMS. — In the *Am. Ant.* 1900, pp. 245-252, is a description by William C. Winslow of Egyptian monuments in museums in the United States (6 figs.), followed by an Appendix, describing additional monuments in Chicago, by the editor, S. D. Peet.

BYZANTINE AND MEDIAEVAL ART GENERAL AND MISCELLANEOUS

MONUMENTS OF BYZANTINE ART. — The French Byzantinists, notably Bayet, Diehl, Müntz, Omont, and Schlumberger, have united in the publication of a new periodical called *Monuments de l'Art Byzantin*, of which the first volume, containing a study of the cloister of Daphni, near Athens, has already appeared, and six further volumes in the series have been announced. The purpose is chiefly to furnish new material for study. The publisher is Ernest Leroux, Paris. (*Nation*, December 13, 1900.)

ITALY

ALBENGA. — Restoration of the Baptistry. — Important restorations now going on in the baptistry at Albenga confirm the popular belief in its great age; i.e. that it belongs to the fifth century. Removal of the existing pavement has disclosed the ancient pavement of precious marbles, with remains of the primitive baptismal font and the ciborium that covered it; while simple cleaning about the altar niche has laid bare mosaics similar to those of the mausoleum of Galla Placidia at Ravenna, which dates from 440 A.D. The earth about the baptistry has been removed, uncovering several tombs, Roman as well as Christian. Remains of painting and sculpture, the pierced marbles filling the windows, a feature of great rarity, and the construction — now, for the first time in centuries, made evident — render the building of great interest to the archaeologist. The restorations (by the Ufficio Regionale for Piedmont and Liguria, corresponding to the French Commission des Monuments Historiques) are being conducted with intelligence and conscience. (*Nation*, December 13, 1900.)

ROME. — Congress of Christian Archaeology. — The Second Congress of Christian Archaeology was held at Rome in April, 1900. The subjects treated were classified as follows: (1) Early Christian Art. (2) Mediaeval

Christian Art in the West. (3) Mediaeval Christian art in the East. (4) Liturgies. (5) Epigraphy. (6) Early Christian Literature in its Relation to Art. (7) Didactic and Practical Archaeology, Instruction, Popularization, Excavation, Museums. A report of the transactions is given in *R. Art Chrét.* 1900, pp. 431-438, and in *Röm. Quartalschr.* 1900, pp. 217-221.

An Early Basilica.—Near the Palatine an ancient church under and near Santa Maria Liberatrice has been brought to light. Its site was already known. It is called Santa Maria Antica. At the entrance was a rectangular hall, which may have been the baptistery. Perhaps it received water from the fountain of Juturna. (*Chron. d. Arts*, November 17, 1900. Cf. *Berl. Phil. W.* November 10, 1900.)

S. Croce in Gerusalemme.—In the *Röm. Quartalschr.* 1900, pp. 177-186, August Stegeensek contributes an article entitled 'Architektonische Untersuchung von S. Croce in Gerusalemme in Rom.' He concludes that to the old hall of Heliogabalus the apse was added by Constantine, that the basilica without galleries was erected under Gregory II, that the closing of old and opening of new windows took place at various periods until the round window in the façade was made in 1370. The baroque reconstruction of 1643 makes it difficult to trace the architectural changes of earlier days.

Excavations under the Sancta Sanctorum.—Ph. Lauer of the French School in Rome has discovered under the Scala Santa remains of a wall of republican times, parts of three columns, and some minor fragments. In the halls here are some square pillars built by Leo III. The frescoes of the eleventh or twelfth century are still preserved on some of these. One represents the burial of St. John the Evangelist, others represent other saints. Under the Sancta Sanctorum is a mass of masonry, 13 m. long, 9 m. wide, and 6 m. high. Within this was a pit containing bones, no doubt relics. On a wall engaged in the masonry was a fresco, representing a man clad in tunic and pallium seated at a pulpit. He holds a roll in his left hand. An inscription reads, *Diversi diversa patres s[ed hic] omnia dixit Romano eloquio mystica (s) sensa tonans*. Evidently St. Augustine is represented. The style of the painting and the inscription refers them to the fifth or sixth century. (Ph. LAUER, *C. R. Acad. Insc.* 1900, pp. 320-324; 2 figs.; DUCHESNE, *ibid.* pp. 380-382. More fully, Ph. LAUER, *Mél. Arch. Hist.* XX, 1900, fasc. iii-iv. Cf. LANCIANI, *Athen.* December 8, 1900.)

SYRACUSE.—**Early Christian Tombs.**—Paolo Orsi publishes in the *Röm. Quartalschr.* 1900, pp. 187-209, an account of the Christian tombs recently discovered near the former monastery of the Cappuccini at Syracuse. Amongst the objects here discovered, the most interesting are the Jewish lamps and other objects which seem to have been retained in use after the Sicilian Jews had been converted to Christianity. They seem to testify also to the relations of Eastern Sicily and Syria.

FRANCE

HOUSES OF THE TEMPLARS IN THE ORIENT AND FRANCE.

—A. Trudon des Ormes continues his study entitled *Maisons du Temple en Orient et en France*, in *R. Or. Lat.* 1900, pp. 504-589. The present article considers the establishments of the Knights Templar in Aquitaine, Poitou, Entre-deux-Mers, Périgord, Auvergne, Limousin, and Provence.

MODELS OF FRENCH ARCHITECTURE.—M. de Baudot has completed a series of ten models, giving sections of monuments of French Mediaeval and Renaissance architecture. The vault, for example, as treated in different provinces and at different periods is here well exemplified. The monuments thus far reproduced are the following: (1) Notre Dame du Port, Clermont-Ferrand; (2) Church at Rieux (Marne); (3) Notre Dame, Dijon; (4) St. Urbain, Troyes; (5) Church at la Ferté-Bernard (Sarthe); (6) Château de Dampierre (Charente-Inférieure); (7) Stairway of Château de Blois; (8) Tower of Cathedral at Senlis; (9) Cathedral of Puy; (10) Cathedral of Beauvais. (*R. Art Chrét.* 1900, pp. 459-460.)

BURGUNDIAN ARCHITECTURE.—In the *Am. Arch.* 1900, for September 8, 29, October 13, Paul Waterhouse gives an account of an architectural tour to Sens, Auxerre, Pontigny, Beaune, Autun, Avalon, Semur, and Vezelay.

AVIGNON.—**Restoration of the Papal Palace.**—The French authorities are seriously agitating the project of a restoration of the Papal Palace at Avignon, one of the most characteristic specimens of mediaeval architecture. For about a century it has been used by the government as a barracks, as a result of which the structure is in a deplorable condition. The walls and frescoes are much defaced. The frescoes of the chapel of St. John, regarded as the work of Spinello (Aretino), which picture the 'Last Judgment' and the 'Crucifixion,' are practically lost to art. It is estimated that the restoration of the building would cost about seven million francs. (*Nation*, August 23, 1900.)

PARIS.—**Congress of the History of Art.**—At the Congress of the History of Art, held at Paris in July, 1900, Professor Venturi described his method of teaching with the aid of phototype illustrations. Salomon Reinach urged the necessity of centralizing collections of photographs and the establishment of a central bureau of information. Papers and special topics were read by Bredius, Dehio, Molinier, Bertaux, Blanchet, and others. (*Chron. d. Arts*, 1900, pp. 258, 272.)

Retrospective Exhibition of French Arts.—Under the title, 'L'Exposition Rétrospective de l'Art Français,' the *Gaz. B.-A.*, 1900, publishes a series of articles. Auguste Molinier treats of the MANUSCRIPTS in *Gaz. B.-A.* 1900, pp. 104-121. Various local libraries, such as those at Boulogne, Havre, Cambrai, Grenoble, Valenciennes, contributed ornamented and illuminated Mss. ranging in date from the ninth to the sixteenth centuries. Some of these contained signed miniature paintings of fine quality.

The BRONZES are reviewed by P. Frantz Marcou (*ibid.* pp. 121-134). Some excellent examples of mediaeval bronze vessels, ecclesiastical and secular, were exhibited, and representative small bronzes from the period of the Renaissance to the present century.

The GOLDSMITH WORK is treated by Émile Molinier (*ibid.* pp. 160-172, 349-365). The first article treats of the exhibits of the eleventh and twelfth centuries from the abbey of Conques, from the old cathedral of Toul, from the abbey of Saint-Bertin, and from the abbey of Saint-Riquier. The second article treats in particular of the school of Limoges and of the exhibits of the late Renaissance period.

The art of ENAMEL PAINTING would seem to have advanced beyond the cloisonné process in Italy and France independently at the end of the fifteenth century.

teenth century. Enamel painting on glass led the way to enamelling on copper. The fine exhibit of enamel paintings at the Paris Exposition of 1900 is discussed by Émile Molinier. (*Gaz. B.-A.* 1900, pp. 422-436.)

The art of French CERAMICS was well represented at the Paris Exposition. Émile Molinier (*ibid.* pp. 436-462) emphasizes the French character in the ceramics of the Gallo-Roman period. In the Middle Ages, French ceramics experienced the influence of the Orient, especially in the technique and design of glazed tile pavements. More independent of foreign influences are the French ceramics of the sixteenth and seventeenth centuries.

The old French IRON WORK exhibited at the Paris Exposition is described by P. Frantz Marcou (*ibid.* pp. 307-316). Specially noteworthy are the iron keys of the sixteenth, seventeenth, and eighteenth centuries, from the collection of M. Doisteau.

The COINS and SEALS are reviewed by M. Prou (*ibid.* pp. 63-78). The collection presented specimens of early Gallic, Merovingian, Mediaeval, and Renaissance coins, as well as a representative series of seals.

J. J. Guiffrey describes the TAPESTRIES exhibited at the Exposition in Paris (*ibid.* pp. 89-103). From Beaune, Mans, Reims, Sens, Angers, were sent interesting tapestries of the fifteenth century; but extraordinarily fine are the sixteenth century Flemish tapestries sent by the King of Spain.

In the *Gaz. B.-A.* (November, 1900, pp. 377-396; December, 1900, pp. 537-562), Georges Lafenestre discusses the EARLY FRENCH PAINTINGS in a study entitled, 'La Peinture Ancienne à l'Exposition Universelle.' He analyzes the 'Coronation of the Virgin' (1453-54), by Enguerrand Charonton, from the Musée de Villeneuve-lez-Avignon, indicating its half-Flemish, half-Italian character; also the fine fifteenth-century triptych from the cathedral, and four panels from the museum at Moulins. The paintings of the sixteenth, seventeenth, and eighteenth centuries, being more numerous, are necessarily treated with more brevity.

Exhibition of Hungarian Art.—'Exposition rétrospective de la Hongrie' is the title of an article by E. de Radisics in the *Gaz. B.-A.* 1900, pp. 265-283. Without confining his attention to the very interesting objects, especially those of the fifteenth century, exhibited at the Paris Exposition, E. de Radisics in this article writes as an advocate anxious to establish the national character of Hungarian art.

Retrospective Exhibit of Japanese Arts.—The Paris Exposition succeeded in bringing to the eyes of the Western world some very early and valuable examples of Japanese art. The sculptures are enthusiastically treated by Emile Hovelague, in *Gaz. B.-A.* 1900, pp. 317-334. The statuettes of the sixth century, sent by the Emperor, are important, and show the influences which emanated from India and China. The eleventh and twelfth century wooden statues of Uima and Monju, emblematic of the severe thought and of the wisdom of Buddha, are masterpieces.

GERMANY

REICHENAU.—**Early Paintings.**—On the island of Reichenau, in Lake Constance, a great mural painting of about the ninth century has been found. It represents Christ in glory, surrounded by symbols of the evangelists and Saints Peter and Paul. At the right and left are two seraphim. Below, framed in arcades, are the apostles and prophets. This is the most

important painting of this period in Germany. Other paintings, less well preserved and dating for the most part from the early Gothic period, represent the Madonna, various saints, and scenes from the life of the Virgin. (*Chron. d. Arts*, November 17, 1900.)

SPIRES. — **Imperial Tombs.** — It is reported that the excavations recently made in the cathedral of Spires have resulted in the discovery of three or four imperial tombs, including that of the Empress Bertha, first wife of Heinrich IV, 1056–1106, and that of Conrad II, 1024–39. (*Athen.* September 29, 1900.)

AFRICA

HIPPO. — **Excavations, 1895–98.** — In *Bull. de L'Acad. Hippone*, 1896–98, pp. 29–170 (4 pls.), A. Papier describes minutely excavations of 1895–98 at Hippone. These have brought to light Roman walls of solid masonry and thinner Byzantine walls of material gathered in the ruins of the ancient town. Several mosaic floors have been found, among them a Byzantine work, probably of the sixth century, representing Amphitrite carried by two marine centaurs, accompanied by two Nereids. The article includes a general discussion of Byzantine art in northern Africa.

TIPASA. — **St. Salsa.** — At the July meeting of the Berlin Arch. Gessellsch., Mr. Dessau spoke on the basilica of St. Salsa at Tipasa, discovered by Gsell in 1891, — a three-nave basilica containing a mosaic inscription from the middle of the fifth century and an earlier gravestone of Fabia Salsa, possibly that of the saint herself. (*Arch. Anz.* 1900, 3, p. 153.)

RENAISSANCE ART

ITALY

UNKNOWN OR LITTLE KNOWN ITALIAN PAINTERS.

The following list of little known Italian painters is added by Gerspach in the *R. Art Chré.* 1900, p. 428, to the list published in the same journal in 1895: Brandimorte (Benedetto), sixteenth century; Carteletto (Bernardino) da Massa, fifteenth century; Cecchi Francesco Antonio, eighteenth century; Cimento da Padova, fifteenth century; Giuliano Amadei da Firenze, fifteenth century; Coppola (Andrea), 1636; Ghirlando (Agostino) da Firizano, sixteenth century; Grazia Leonardo, sixteenth century; Marracci (Giovanni), seventeenth century; Orlando Deodato, thirteenth century; Pucinelli (Angelo), fourteenth century; Riccio da Siena, 1599; Santi Bartolomeo, eighteenth century; Trenta Banduccio da Lucca, sixteenth century.

DOCUMENTS CONCERNING FIFTEENTH-CENTURY ITALIAN PAINTERS.

— A series of documents hitherto inedited is published by F. Malaguzzi in *L'Arte*, 1900, pp. 144–146. They concern Matteo Pasti, Baldassare d'Este, Giovanni da Milano, Cristoforo da Cremona, Vincenzo (Foppa) da Brescia, Leonardo da Cremona, Zanetto, Ambrogio de Predis, and Antonello da Messina.

ARCETRI. — **Frescoes of the Fifteenth Century.** — At Arcetri, near Torre di Gallo, in a private house, frescoes of the fifteenth century have been found representing dancers. They are much damaged, but exhibit remarkable composition and sureness of hand. They may be by Antonio Pollajuolo. (*Chron. d. Arts*, September 22, 1900.)

CREMONA.—*The Painters of Cremona.*—The *Esposizione d'Arte Sacra*, held in Cremona in 1899, brought together a number of paintings of the Cremona school. Here were paintings by Boccaccio Boccaccino, Galeazzo Campi, Tommaso Aleni, Lorenzo Becci, Francesco e Filippo Tacconi, Galeazzo Rivelli della Barba, Antonio Cicognara, Altobello Ferrari, Gian Francesco Bembo, Giulio Campi, Bernardino Gatti, and others. A study of these paintings, by Eugenio Schweitzer, is published in *L'Arte*, 1900, pp. 41-70.

FERRARA.—*The Paintings in the Ateneo.*—In the *Rep. f. K.* 1900, pp. 358-376, Emil Jacobsen gives an account of the paintings in the Athenaeum Gallery at Ferrara. The earliest are ascribed to Cristoforo da Ferrara (1340-1404). This gallery contains paintings by Cosimo Tura, Garofalo, Dosso Dossi, Ercole Grande, and others of lesser note.

FLORENCE.—*Exhibition of Old Masters.*—The private collections of Florence contain many treasures practically unknown. A few of these have recently been secured for exhibition by M. Cantigalli. Special mention is made by B. Berenson in the *Gaz. B.-A.* 1900, pp. 79-83, of a 'Pietà' by Crivelli, signed and dated 1485, of a 'Madonna' by Alessio Baldovinetti, and of a charming Donatellesque relief attributed to Desiderio da Settignano.

PIENZA.—*Works of Art.*—In his recent journeying through Tuscany, Gerspach visited Pienza, and describes its works of art in the *R. Art Chré.* 1900, pp. 306-318. Besides the objects of interest in the Piccolomini palace, in the Cathedral, and in the Cathedral Museum, Gerspach publishes several of the important frescoes by Sodoma in the neighboring convent of Santa Anna.

VENICE.—*'St. Jerome' by Bassano.*—The director of the Venetian Pinacoteca, J. Cantalamessa, has bought from a man in Mestre a 'San Girolamo' by Jacopo da Ponte detto il Bassano (1510-1592). San Girolamo is represented as a splendid old man, half naked, sitting on the threshold of a cavern, leaning his pensive head on his left arm, and looking up to the cross which rises at some distance from the cavern. (*Athen.* October 6, 1900.)

'Violante' by Palma il Vecchio.—Signor Cantalamessa has bought for the Venetian gallery a hitherto unknown painting by Palma il Vecchio, which he regards as a portrait of the artist's daughter Violante. (*Athen.* September 29, 1900, from the *Baseler Nachrichten*, September 18.)

A Painting by Alvise Vivarini.—The Accademia at Venice has acquired a *tondo* representing the *Padre Eterno*, surrounded by winged cherubim. It is by Alvise Vivarini, and formerly decorated the ceiling of the Scuola di San Girolamo at Cannaregio. (*L'Arte*, 1900, p. 161.)

Two Busts by Alessandro Vittoria.—In *L'Arte*, pp. 161-163, A. Romualdo publishes two busts, one of Francesco, the other of Domenico Duodo, both the work of Alessandro Vittoria. The busts have been recently acquired for the Accademia at Venice.

PORTUGAL

LISBON.—*'St. Jerome' by Dürer.*—Professor A. Weber, of Ratisbon, has discovered in the museum at Lisbon a painting of St. Jerome reading the Bible, by Dürer. This is a picture mentioned in Dürer's journal of his journey to the Low Countries. The fine crayon drawings of an old man in the Albertina at Antwerp are utilized for this picture, but the coloring is rather poor. (*Chron. d. Arts*, November 10, *Athen.* December 1, 1900.)

GERMANY

BERLIN.—**A New Dürer.**—The Berlin Museum has received a new work of Albrecht Dürer. It represents a young girl with blond hair. She has on a toque and a red gown trimmed with green velvet. It was probably painted when Dürer was at Venice. (*Chron. d. Arts*, September 22, 1900.)

Portrait by Jan Van Eyck.—The Museum of Berlin has recently acquired a fine portrait by Jan Van Eyck. It represents a Knight of the Golden Fleece, as may be judged by the enamelled necklace worn by that order. The portrait is recognized as that of Jean, Seigneur de Rombaix, by W. H. James Weale in the *Gaz. B.-A.* 1900, pp. 173-176.

MUNICH.—**Recent Acquisitions of the Gallery.**—Among the recent acquisitions of the Alte Pinakothek at Munich noticed by G. Frizzoni in *L'Arte*, 1900, pp. 72-85, are a signed portrait of Lionardo Armano by Leandro Bassano; a portrait by Bernardino Licinio; a portrait by Hans Holbein; a 'Madonna' by Antonello da Messina; a *tondo* by Luca Signorelli; a 'Pietà' by Liberale da Verona, and two pictures of St. Gregory by Michael Pacher.

AUSTRIA-HUNGARY

BUDAPEST.—**Italian Paintings.**—In *L'Arte*, 1900, pp. 185-240, A. Venturi contributes an important study, 'I Quadri di Scuola Italiana nella Galleria Nazionale di Budapest.' The National Gallery at Budapest is rich in Italian paintings. Special attention in this article is given to paintings by Michele Ungaro, Ercole Grande, Scarsellino, Francia, Bertucci da Faenza, Girolamo da Cotignola, Correggio, Mazzola, Borgognone, Bernardo Luini, Giampietrino, Boltraffio, Gentile Bellini, Catena, Basaiti, Previtali, Girolamo da Santa Croce, Lorenzo Lotto, Giacomo Bassano, Feti, Berlotti, Tiepolo, Raphael, Rudolfo Ghirlandaio, Andrea del Sarto, and Bronzino.

PRAGUE.—**Frau Agnes Dürer.**—In the 'Rosenkranzbild' at Prague Dürer introduced his own portrait. It has apparently escaped attention that the kneeling woman with a white headcloth is Dürer's wife, Agnes Dürer, known to us by various portraits. As she could hardly have been with him when this picture was painted, this is an interesting testimonial to Dürer's fidelity to his wife. (PAUL WEBER, *Rep. f. K.* 1900, pp. 316-317.)

UNITED STATES

BOSTON.—**An Unpublished Masterpiece of Filippino Lippi.**—In *R. Arch.* XXXVII, 1900, pp. 238-243 (pl. xi), B. Berenson publishes a circular painting by Filippino Lippi, in the possession of Mrs. S. D. Warren, of Boston, formerly in the Sant' Angelo collection in Naples. The Virgin is seated in a *loggia* with a landscape in the background. The Child whom she holds in her lap is leaning forward to kiss the little St. John, who is held by St. Margaret. At the left is St. Joseph, leaning on his staff. This picture has special points of resemblance to the altar piece of San Spirito at Florence, and both were probably painted about 1493 or 1494.

NEW YORK.—**The Avery Collection of Engravings.**—Mr. S. P. Avery, of New York, has given the New York Public Library his collection of etchings, lithographs, and photographs, with books illustrated by means of lithographs and engravings. The collection contains fifteen thousand etchings and nearly eighteen thousand lithographs. (*Am. Arch.* May 19, 1900.)

ABBREVIATIONS

Abh.: Abhandlungen. *Acad.*: Academy (of London). *Am. Ant.*: American Antiquarian. *Am. J. Arch.*: American Journal of Archaeology. *Ami d. Mon.*: Ami des Monuments. *Ann. d. Ist.*: Annali dell' Istituto. *Anz. Schw.*: Anzeiger für Schweizerische Altertumskunde. *Arch. Ael.*: Archaeologia Aeliana. *Arch.-Ep. Mitth.*: Archäol.-epigraph. Mittheil. (Vienna). *Arch. Anz.*: Archäologischer Anzeiger. *Arch. Portug.*: O Archeologo Português. *Arch. Rec.*: Architectural Record. *Arch. Hess. Ges.*: Archiv für Hessische Geschichte und Altertumskunde. *Arch. Rel.*: Archiv für Religionswissenschaft. *Arch. d. Miss.*: Archives de Missions Scientifiques et Littéraires. *Arch. Stor. d. Art.*: Archivio Storico dell' Arte. *Arch. Stor. Lomb.*: Archivio storico lombardo. *Arch. Stor. Nap.*: Archivio Storico Province Napolitane. *Arch. Stor. Patr.*: Archivio della r. società romana di storia patria. *Athen.*: Athenaeum (of London).

Beitr. Ass.: Beiträge zur Assyriologie. *Berl. Akad.*: Preussische Akademie der Wissenschaften zu Berlin. *Berl. Phil. W.*: Berliner Philologische Wochenschrift. *Berl. Stud.*: Berliner Studien. *Bibl. Éc. Chartes*: Bibliothèque de l'École des Chartes. *B. Ac. Hist.*: Boletín de la real Academia de la Historia. *B. Arch. d. M.*: Bulletin Archéol. du Ministère. *B. Arch. C. T.*: Bulletin Archéologique du Comité des Travaux hist. et scient. *B. C. H.*: Bulletin de Correspondance Hellénique. *B. Inst. Ég.*: Bulletin de l'Institut Égyptien (Cairo). *B. M. Soc. Ant. Fr.*: Bulletin et Mémoires de la Société des Antiquaires de France. *B. Soc. Anth.*: Bulletin de la Société d'Anthropologie de Paris. *B. Soc. Yonne.*: Bulletin de la Société des Sciences historiques et naturelles de l'Yonne. *B. Mon.*: Bulletin Monumental. *B. Arch. Stor. Dal.*: Bullettino di Archeologia e Storia Dalmata. *B. Com. Roma.*: Bullettino d. Commissione Archeologica Comunale di Roma. *Bull. d. Ist.*: Bullettino dell' Istituto. *B. Arch. Crist.*: Bullettino di Archeologia Cristiana. *B. Paletn. It.*: Bullettino di Paletnologia Italiana. *Byz. Z.*: Byzantinische Zeitschrift.

Chron. d. Arts.: Chronique des Arts. *Cl. R.*: Classical Review. *C. R. Acad. Insc.*: Comptes Rendus de l'Académie des Inscriptions et Belles-Lettres. *C. I. A.*: Corpus Inscriptionum Atticarum. *C. I. G.*: Corpus Inscriptionum Graecarum. *C. I. G. S.*: Corpus Inscriptionum Graeciae Septentrionalis. *C. I. L.*: Corpus Inscriptionum Latinarum. *C. I. S.*: Corpus Inscriptionum Semiticarum. *Δελτ. 'Αρχ.*: Δελτίον 'Αρχαιολογικόν. *D. & S. Dict. Ant.*: Dictionnaire des Antiquités grecques et romaines par Ch. Daremberg et Edm. Saglio, avec le concours de E. Pottier.

Échos d'Or.: Les Échos d'Orient (Constantinople). *'Εφ. 'Αρχ.*: 'Εφημερίς 'Αρχαιολογική. *Eph. Epig.*: Ephemeris Epigraphica.

Fundb. Schwab.: Fundberichte aus Schwaben, herausgegeben vom württembergischen anthropologischen Verein.

Gaz. B.-A.: Gazette des Beaux-Arts.

I. G. A.: Inscriptiones Graecae Antiquissimae, ed. Roehl. *I. G. Ins.*: Inscriptiones Graecarum Insularum. *I. G. Sic. It.*: Inscriptiones Graecae Siciliae et Italiae. *Intermédiaire*: Intermédiaire de chercheurs et des curieux.

Jb. Alt. Ges. L. P.: Neue Jahrbücher für das klassische Altertum, Geschichte und deutsche Literatur und für Pädagogik. *Jb. Arch. I.*: Jahrbuch d. k. d. Archäol. Instituts. *Jb. Phil. Päd.*: Neue Jahrbücher für Philologie und Pädagogik (Fleckeisen's Jahrbücher). *Jb. Preuss. Kunsts.*: Jahrbuch d. k. Preuss.

Kunstsammlungen. *Jb. V. Alt. Rh.*: Jahrbücher des Vereins von Alterthumsfreunden im Rheinlande. *Jb. Ver. Dill.*: Jahrbuch des Vereins Dillingen. *Jh. Oesterr. Arch. I.*: Jahreshefte des oesterreichischen archäologischen Institutes. *J. Asiat.*: Journal Asiatique. *J. Am. Or. S.*: Journal of American Oriental Society. *J. Anth. Inst.*: Journal of the Anthropological Institute of Great Britain and Ireland. *J. Br. Arch. Ass.*: Journal of the British Archaeological Association. *J. H. S.*: Journal of Hellenic Studies. *J. Int. Arch. Num.*: *Διέθνῃς Ἐφημερίς τῆς νομισματικῆς ἀρχαιολογίας*, Journal international d'archéologie numismatique (Athens).

Kb. Gesamtver.: Korrespondenzblatt des Gesamtvereins der deutschen Geschichts- und Altertumsvereine. *Kb. Wd. Z. Ges. K.*: Korrespondenzblatt der Westdeutschen Zeitschrift für Geschichte und Kunst. *Kunstchron.*: Kunstchronik.

Lex. Myth.: Ausführliches Lexikon der griechischen und römischen Mythologie, herausgegeben von W. H. Roscher (Leipsic, Teubner).

Mél. Arch. Hist.: *Mélanges d'Archéologie et d'Histoire* (of French School in Rome). *Athen. Mitth.*: Mittheilungen d. k. d. Archäol. Instituts, Athen. Abth. *Röm. Mitth.*: Mittheilungen d. k. d. Archäol. Instituts, Röm. Abth. *Mitth. Anth. Ges.*: Mittheilungen der anthropologischen Gesellschaft in Wien. *Mitth. C.-Comm.*: Mittheilungen der königlich-kaiserlichen Central-Commission für Erforschung und Erhaltung der Kunst- und historischen Denkmale. *Mitth. Nassau.*: Mittheilungen des Vereins für nassauische Altertumskunde und Geschichtsforschung. *Mitth. Vorderas. Ges.*: Mittheilungen der vorderasiatischen Gesellschaft. *Mon. Antichi.*: *Monumenti Antichi* (of Accad. d. Lincei). *Mon. Mém. Acad. Insc.*: *Monuments et Mémoires pub. par l'Acad. des Inscriptions, etc.* *Mün. Akad.*: Königlich Bayerische Akademie der Wissenschaften, München. *Mus. Ital.*: *Museo Italiano di Antichità Classiche*.

N. D. Alt.: Nachrichten über deutsche Altertumsfunde. *Not. Scavi.*: *Notizie degli Scavi di Antichità*. *Num. Chron.*: Numismatic Chronicle. *N. Arch. Ven.*: *Nuovo Archivio Veneto*. *N. Bull. Arch. Crist.*: *Nuova Bullettino di Archeologia cristiana*.

Pal. Ex. Fund.: *Palestine Exploration Fund*. *Πρακτικά: Πρακτικά τῆς ἐν Ἀθῆναις ἀρχαιολογικῆς ἐταιρείας*.

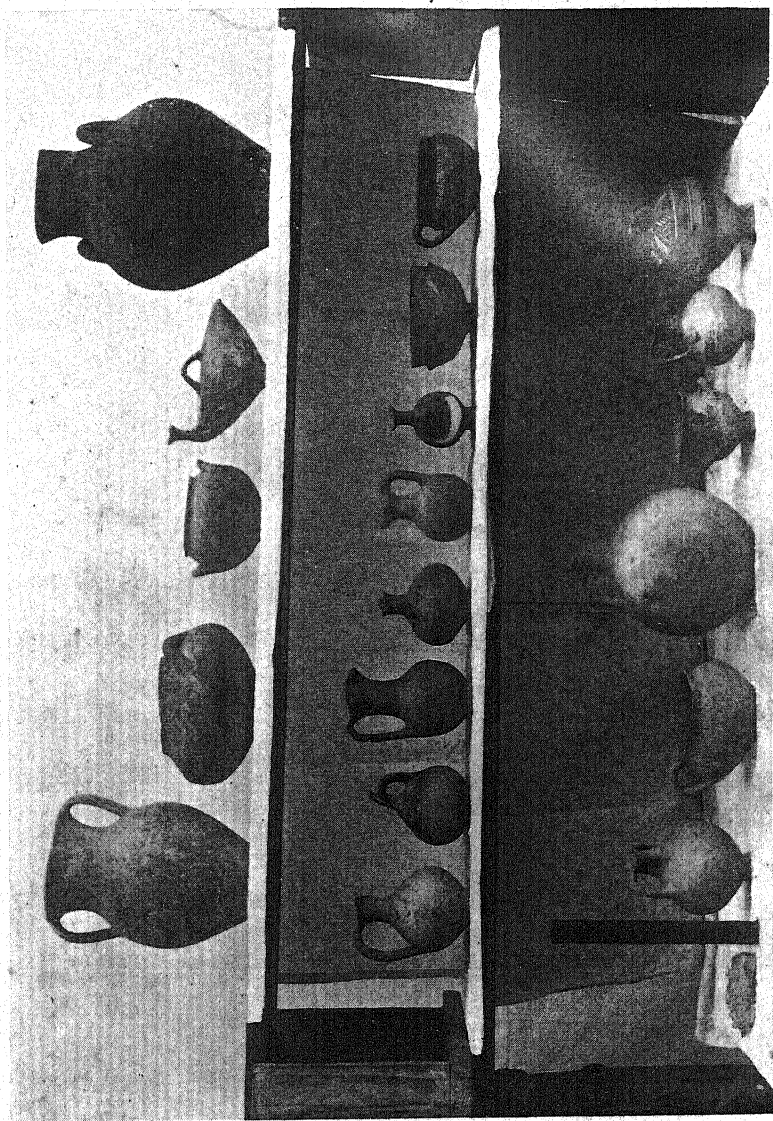
R. Tr. Ég. Ass.: *Recueil de travaux relatifs à la philologie et à l'archéologie égyptiennes et assyriennes*. *Reliq.*: *Reliquary and Illustrated Archaeologist*. *Rend. Acc. Lincei.*: *Rendiconti d. r. Accademia dei Lincei*. *Rep. f. K.*: *Repertorium für Kunstwissenschaft*. *R. Assoc. Barc.*: *Revista da la Asociacion artistico-arqueologica Barcelonesa*. *R. Arch. Bibl. Mus.*: *Revista di Archivos, Bibliotecas, y Museos*. *R. Arch.*: *Revue Archéologique*. *R. Art Anc. Mod.*: *Revue de l'Art ancien et moderne*. *R. Belge Num.*: *Revue Belge de Numismatique*. *R. Bibl.*: *Revue Biblique Internationale*. *R. Crit.*: *Revue Critique*. *R. Art Chrét.*: *Revue de l'Art Chrétien*. *R. Hist. d. Rel.*: *Revue de l'Histoire des Religions*. *R. Or. Lat.*: *Revue de l'Orient Latin*. *R. Ép. M. Fr.*: *Revue Épigraphique du Midi de la France*. *R. Ét. Gr.*: *Revue des Études Grecques*. *R. Ét. J.*: *Revue des Études Juives*. *R. Num.*: *Revue Numismatique*. *R. Sém.*: *Revue Sémitique*. *Rhein. Mus.*: *Rheinisches Museum für Philologie, Neue Folge*. *R. Abruzz.*: *Rivista Abruzzese di Scienze, Lettere ed Arte*. *R. Ital. Num.*: *Rivista Italiana Numismatica*. *R. Stor. Calabr.*: *Rivista Storica Calabrese*. *R. Stor. Ital.*: *Rivista Storica Italiana*. *Röm. Quart.*: *Römische Quartalschrift für christliche Altertumskunde und für Kirchengeschichte*.

Sächs. Ges.: *Sächsische Gesellschaft (Leipsic)*. *S.G.D.I.*: *Sammlung der Griechischen Dialekt-Inschriften*. *Sitzb.*: *Sitzungsberichte*. *S. Rom. d. Stor. Pat.*: *Società Romana di Storia Patria*. *Soc. Ant. Fr.*: *Société des Antiquaires de France*. *Soc. Ant.*: *Society of Antiquaries*. *S. Bibl. Arch.*: *Society of Biblical Archaeology, Proceedings*.

Θρηκ. Ἐπ.: *Θρηκική Ἐπετηρίς, ἐτήσιον δημοσίευμα τῆς ἐν Ἀθῆναις θρακικῆς ἀδελφότητος*.

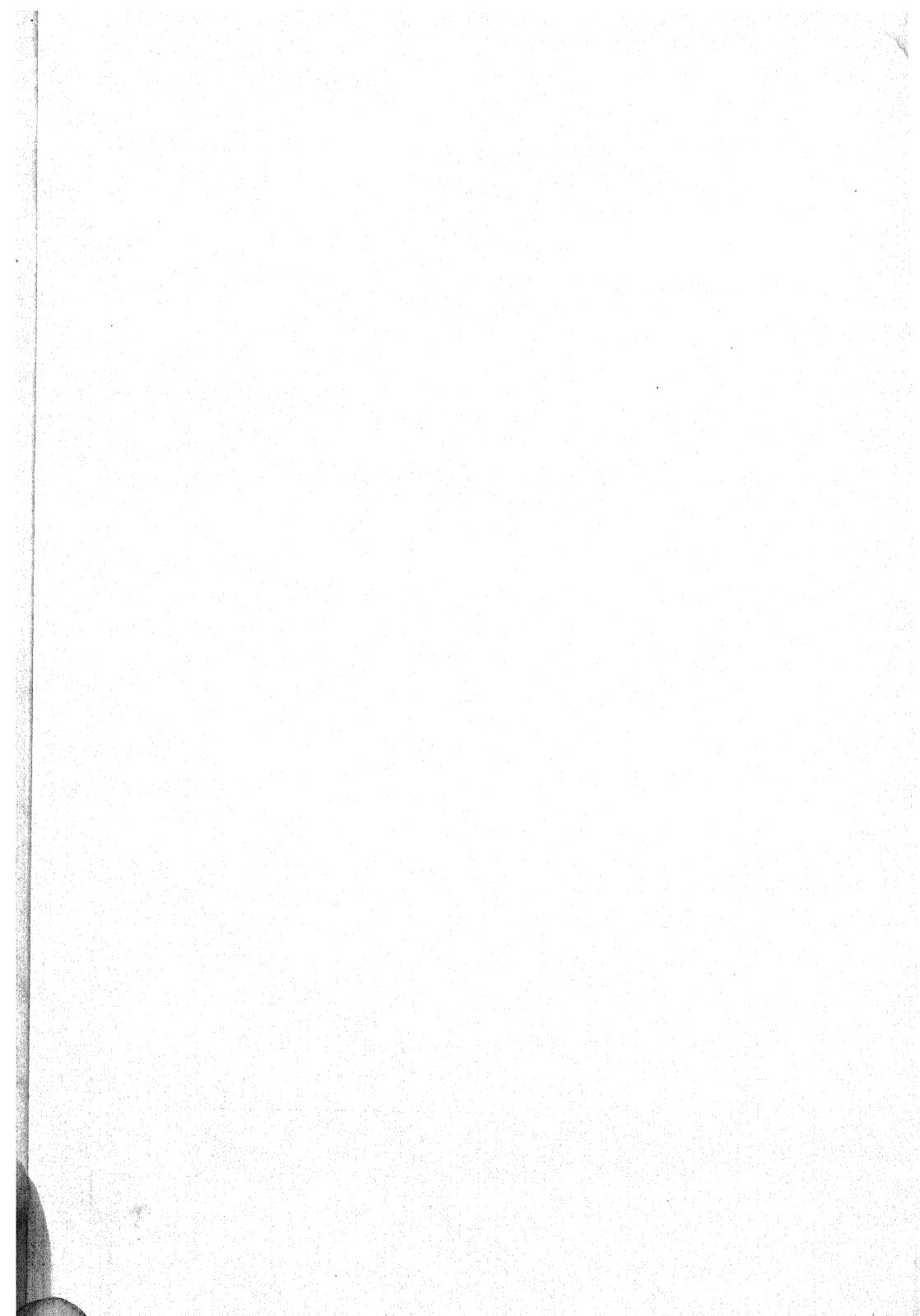
Wiener Z. Morgenl.: *Wiener Zeitschrift für die Kunde des Morgenlandes*.

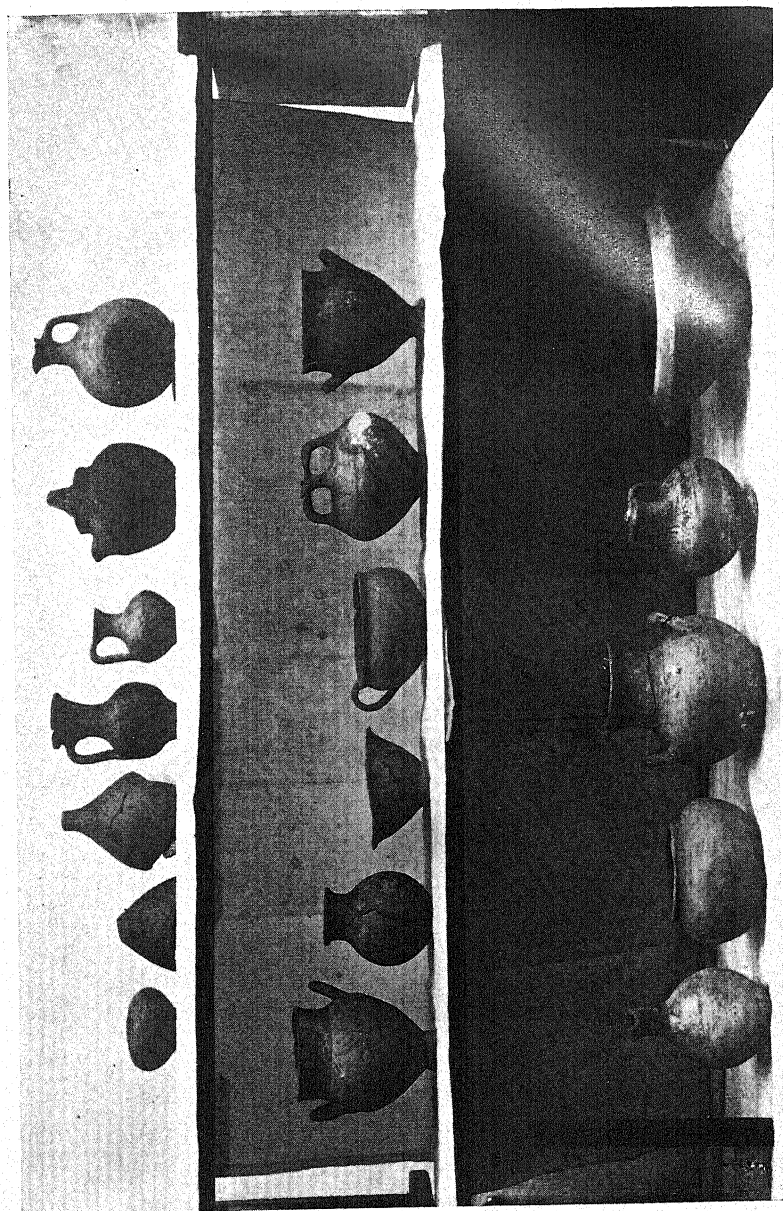
Z. D. Pal. V.: *Zeitschrift des Deutschen Palestina Vereins*. *Z. Aeg. Sp. Alt.*: *Zeitschrift für Aegyptische Sprache und Altertumskunde*. *Z. Assyri.*: *Zeitschrift für Assyriologie*. *Z. Bild. K.*: *Zeitschrift für Bildende Kunst*. *Z. Ethn.*: *Zeitschrift für Ethnologie*. *Z. Mün. Alt.*: *Zeitschrift des Münchener Alterthumsvereins*. *Z. Num.*: *Zeitschrift für Numismatik*.



TYPICAL VASES FROM TOMB 3 ON THUNDER HILL. KAVOUSI

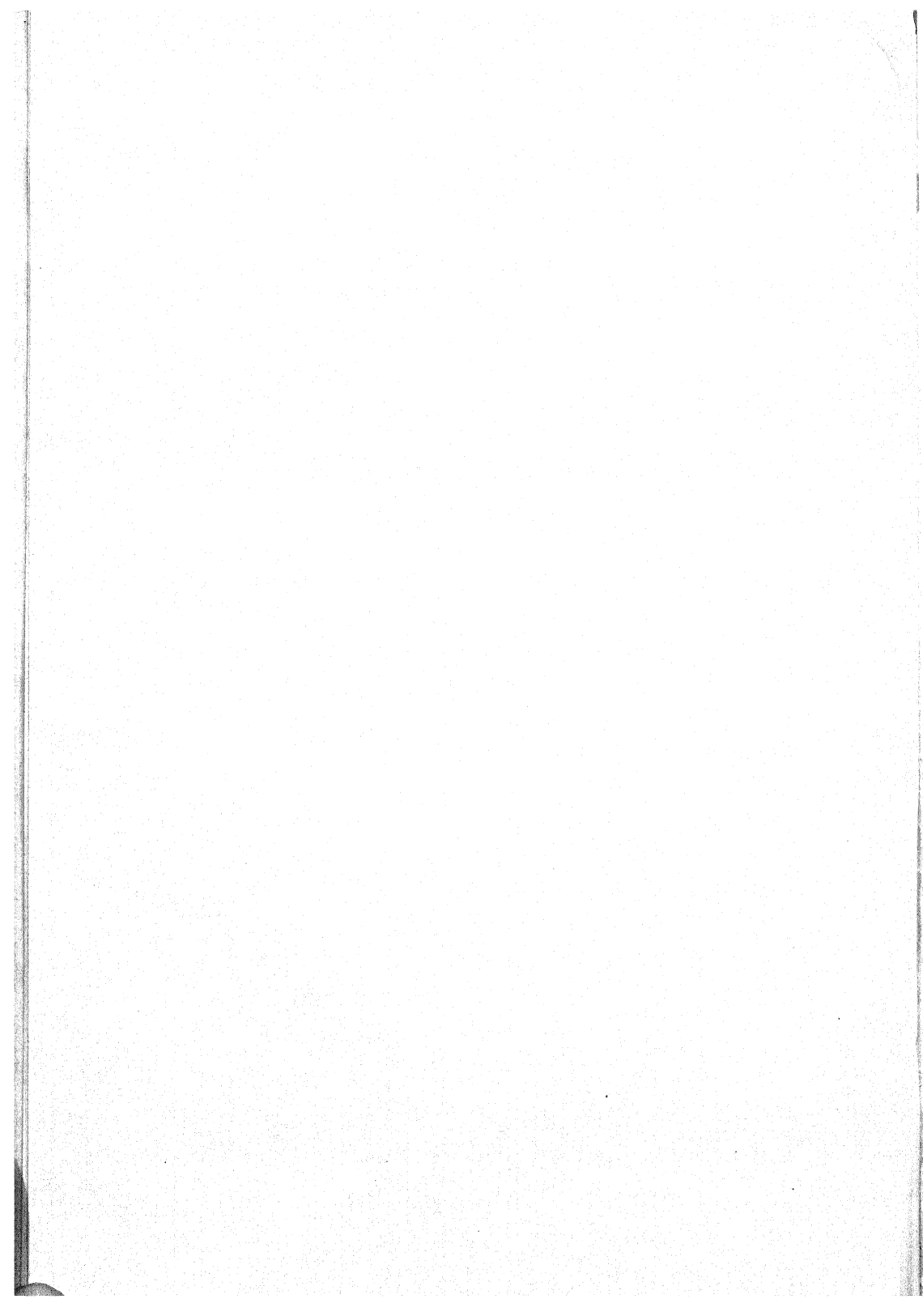
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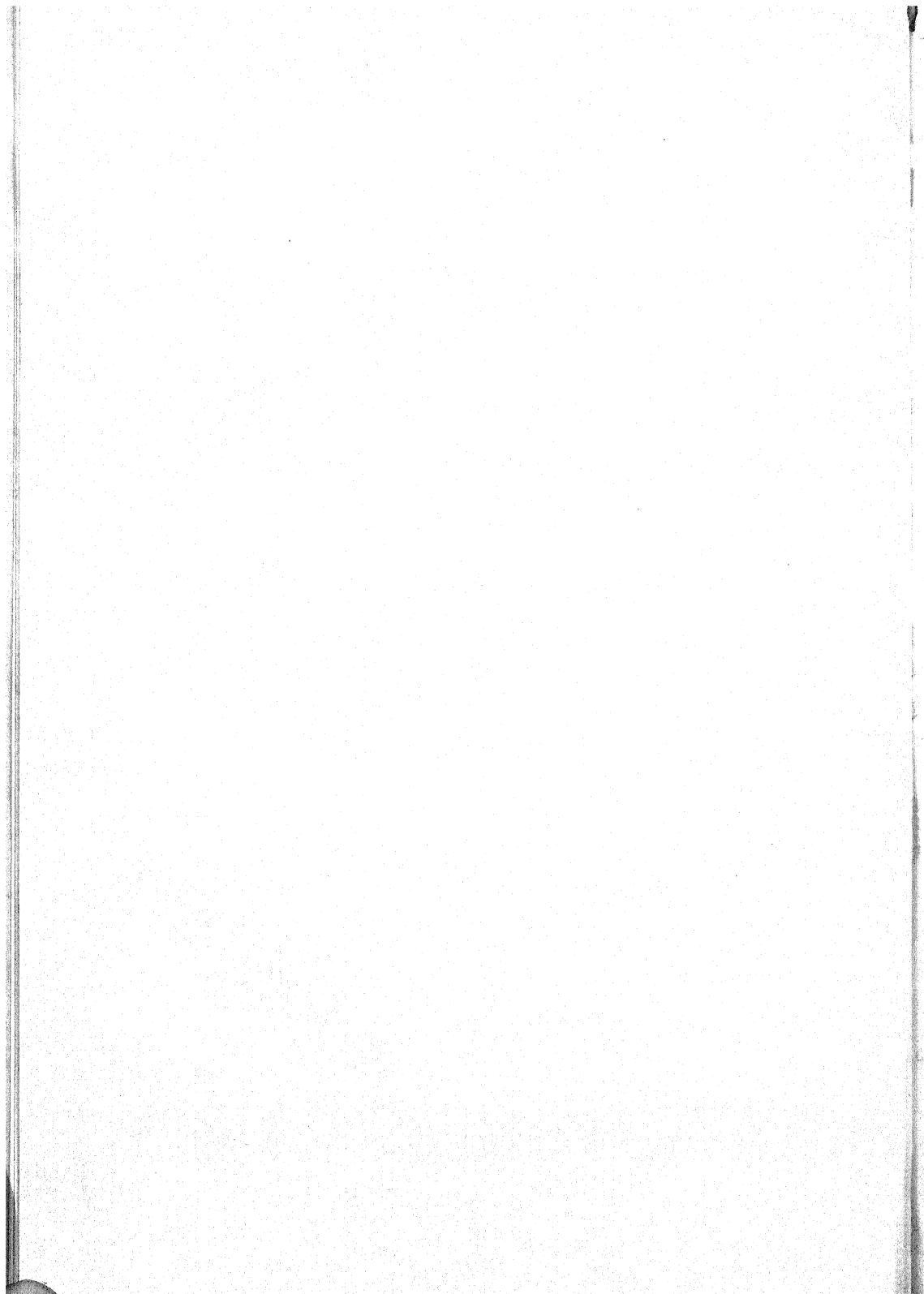
TYPICAL VASES MAINLY FROM TOMBS 1, 2, AND 4 ON THUNDER HILL

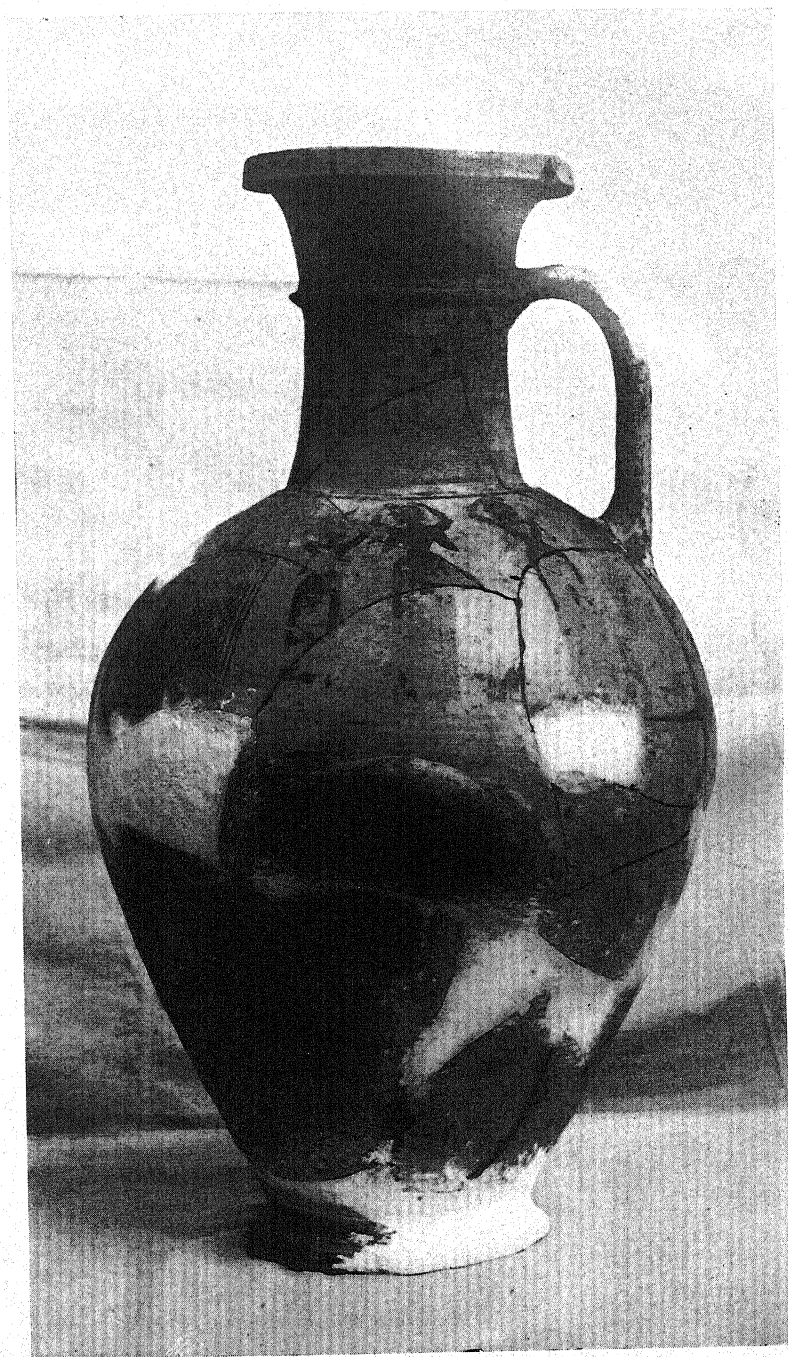
For the three pieces on the top row at the left, see pp. 131, 143. Scale is shown by the rule, which is 0.21 m. high



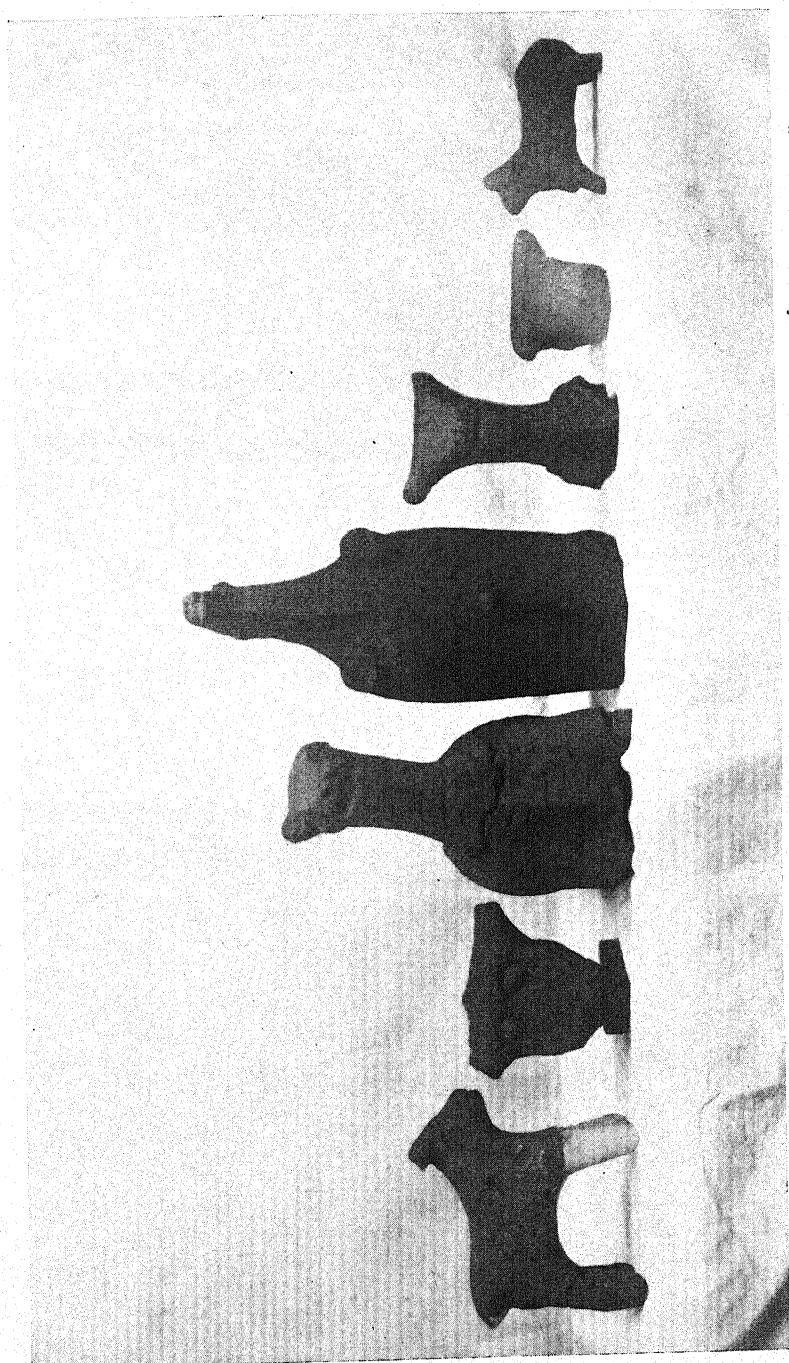


HYDRIA FROM THOLOS TOMB ON RUSTY RIDGE: LEFT SIDE





HYDRIA FROM THOLOS TOMB ON RUSTY RIDGE: RIGHT SIDE



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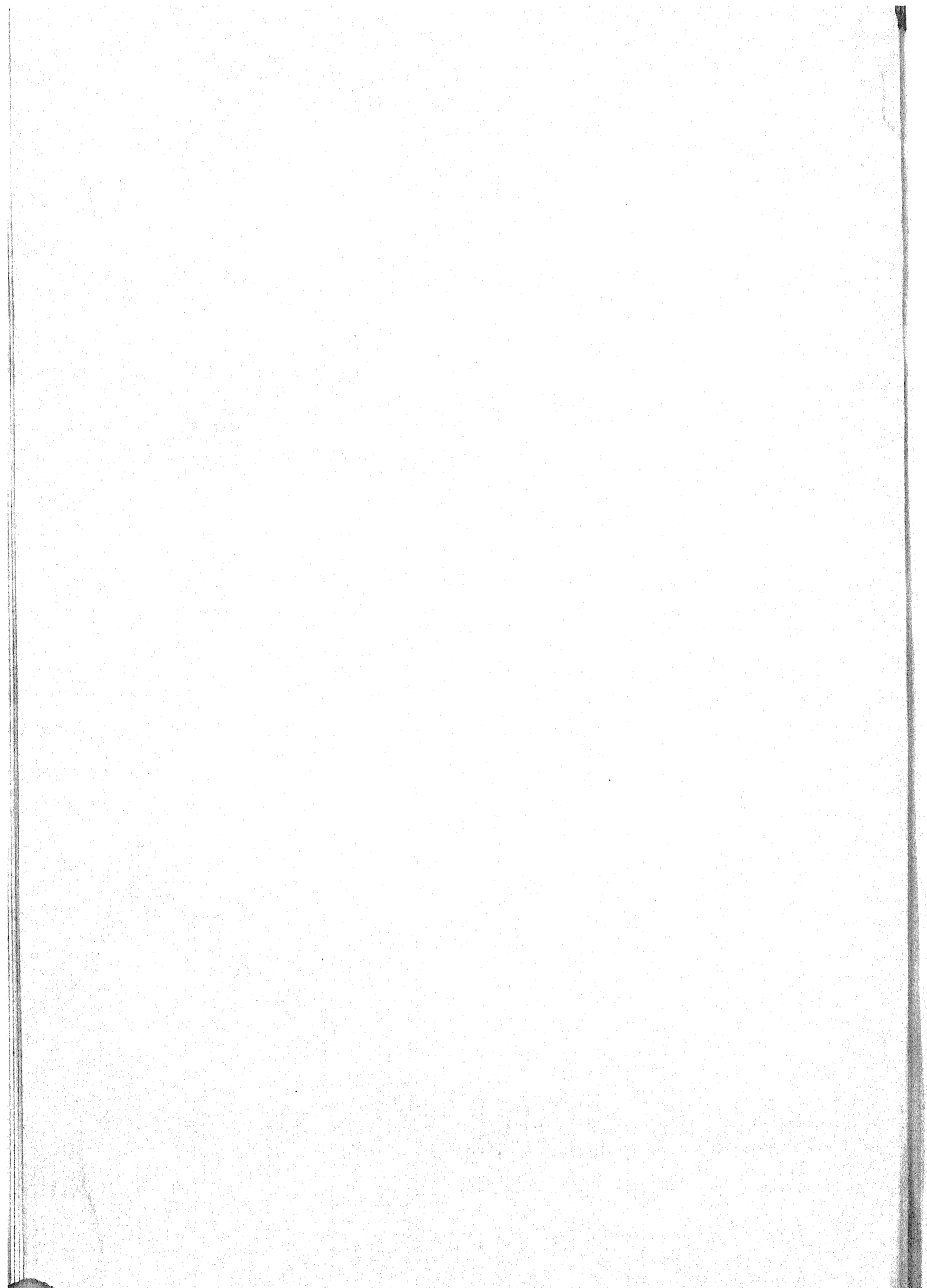
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TERRA-COTTA ANIMALS FROM CITADEL SLOPE, KAVOUSI

a



American School
of Classical Studies
at Athens

EXCAVATIONS AT KAVOUSHI, CRETE, IN 1900

[PLATES I-V]

WITH the appointment of Prince George as Prince High Commissioner of Crete, *Πρίγκηψ Ὑπατος Ἀρμοστής τῆς Κρήτης*, a new era in Cretan archaeology began. Before that time regular excavations could not be made because of the turbulence of the island; foreign archaeologists, although convinced that a rich harvest awaited them, were not permitted to put their convictions to a satisfactory test; the Turks and Ottoman Cretans did not care to make researches which would reflect glory on a Greek past; the native Christians were unwilling to dig up treasure that might be carried off to Constantinople: for these reasons, Crete remained virgin soil. Hardly had the Prince landed in Canea in December, 1899, when English, French, and Italian scholars applied for sites on which they might excavate.

Our own School at Athens was prevented from taking up a claim by the fact that our funds were wholly devoted to the excavations at Corinth. Feeling sure—in view, in part, of the encouragement given to Professor Halbherr's memorable work in 1893-94 on behalf of the Institute,—that the step would be approved, I determined to go over to Crete in the spring of 1900, to see what could be done with a small sum of money that remained to me from the Agnes Hoppin Memorial Fellowship of which I was then the fortunate incumbent.

This idea was beginning to take shape in my mind when Mr. D. J. Hogarth, Director of the British School, and Mr. A. J. Evans of Oxford came to Athens on their way to begin the season's work at Cnossus. I cannot sufficiently express my gratitude for the serious consideration which these experienced

scholars gave to my immature project. By mentioning sites both promising and practicable, they at once put me in the way of doing a useful piece of work.

On the twelfth of April, our party consisting of Miss Patten of Boston and myself, our servant, Aristides Pappadias, and his mother landed at Herakleion. Although Miss Patten's interest lies in botany and not in archaeology, her part in the expedition was an important one by reason of her tact and good judgment and her keen powers of observation, which had been trained to great efficiency by four years of botanical research in the Polytechnicum at Dresden.

The moment of our arrival in Crete was propitious, for Mr. Evans's success at Cnossus had put every one in good spirits. We were fortunate in visiting the Palace of Minos on the day when "the oldest throne in Europe" was brought to light, and in seeing the tablets, which, "when deciphered will serve to make the Mycenaean Age not prehistoric but historic." But we were not bewildered by the magnificent results attained by Mr. Evans. Our attention had been called to the humbler period that followed the Golden Age of Crete, and I felt sure that our chance of finding a task suited to our means and our powers lay in investigating some Geometric site.

Cretan Geometric pottery had already attracted notice. In the *Athenische Mittheilungen*, vol. XXII (1897), pp. 233-258, Wide found his chief examples for the "Nachleben Mykenischer Ornamente" in Cretan vases belonging to the museums at Herakleion and Athens. Orsi in the *American Journal of Archaeology*, Second Series, I (1897), pp. 251-265, discusses Geometric vases at Herakleion. Finally in the *Jahrbuch* for 1899,¹ Wide, taking up again the subject of Geometric pottery, draws most of his material from the islands, and, in connection with Crete, states his opinion that there the strong survival of Mycenaean influence prevented a full development of the Dipylon style (*i.e.* p. 35). In the present paper this opinion is called into question.

¹ S. Wide, 'Geometrische Vasen aus Griechenland,' *Jahrb. des k. d. Arch. Inst.* XIV (1899), pp. 26-43 and 78-86.

In addition to the material used by these writers, the museum at Herakleion possesses a collection of eighty or more Geometric vases marked "Kavousi," which came from a tholos-tomb, accidentally discovered in 1895 by a peasant, Theodosios Mitsakis, who showed it to Mr. Evans, when the latter was travelling through Eastern Crete in 1899. He, in turn, reported the discovery to the government, and under its supervision the contents of the tomb were removed to Herakleion where they await publication at Mr. Evans's hands.

Acting on the advice of British scholars, I made Kavousi the eastern limit of a ten days' prospecting trip through Central Crete, in the course of which we visited Gortyna, — where we were hospitably entertained by Professor Halbherr, — Anoja Messaritica, Ligortino,¹ Rotasi (Homeric Rhytion), Viannos, Mt. Keraton, Vasiliki, Arvi, Hierapetra, and Episcopi. At more than one of these places I might have been tempted to put in the spade had it not been for the salutary laws which forbid unauthorized digging, and for a wish on my own part to defer judgment until we had seen Kavousi. Here the evidence presented by walls, potsherds, and small antiquities found by the peasants, when considered in connection with the tomb discovered five years earlier, seemed to preclude the possibility of failure. We hurried back to Herakleion by way of Kritsa, Neapolis, and Chersonnesos, making the journey of sixty miles in a day and a half (fast travelling for mules), and with the least possible delay sent our petition to the Minister of Education for permission to dig in the neighborhood of Kavousi and Episcopi. On May 10, I received the official document permitting me "as representative of the American School of Archaeology at Athens to excavate in the name of the Cretan government," and three days later we were established in Kavousi ready to begin work on Monday, May 14. The

¹ For Mr. Evans's notes on these sites, see articles published in the *Academy* of June 13, 20, July 4, 18, 1896. A résumé of these articles is given in *A. J. A.*, 1896, pp. 462-467; Ligortino, p. 466; Keraton, p. 465; Arvi, p. 464; Hierapetra, p. 462.

campaign lasted little over a month, with a force varying from ten to forty-eight men, the usual number being between eighteen and twenty-six.

Kavousi (Fig. 1) stands¹ near the northern end of the low, narrow isthmus that connects Sitia with the rest of Crete, "a day's ride east of Psychro," and four hours from Goulas. The village belongs to the eparchy of Hierapetra, and is the home

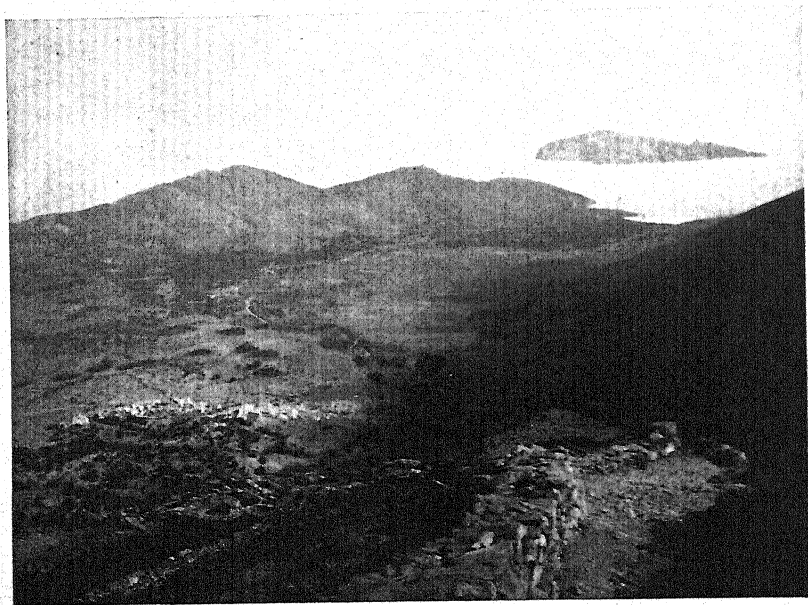


FIGURE 1. — KAVOUSI PLAIN AND VILLAGE: FROM THE CITADEL.

of about two hundred families, whose tiny white houses cluster upon a mass of rock at the foot of a steep mountain range which, rising above the isthmus on the east, extends like a huge wall from sea to sea. This range, at a height of about 700 m., supports in terrace fashion a mountain plain called

¹ Kavousi lies midway between two points whose bearings are given by Raulin, *Description Physique de l'Île de Crète*, I, p. 326. These points are the island of Psyra, long. $23^{\circ} 32' 40''$, lat. $35^{\circ} 12' 30''$, and Mt. Aphenidi-Kavousi, long. $23^{\circ} 33' 35''$, lat. $35^{\circ} 5' 20''$.

Monasteraki,¹ where many peasants of Kavousi, Epano Chorio, and the neighboring districts live during the summer, escaping the heat of the lowlands, and cultivating their vines with success. From the plateau as a base rises Mt. Aphendi-Kavousi,² the highest peak of Sitia (1472 m.), invisible from Kavousi, though easily reached in a morning's walk. Three mountains of lesser height, Kleros, Azelakias, and Kapsas, stand to the east and northeast of the village. Kapsas has its roots in the sea, and around its northern side winds the road to Sitia.

In sharp contrast to these bare volcanic mountains lies the fertile plain of Kavousi, extending northward from the village two miles to the sea. It is about one and a half miles wide, separated from the Gulf of Mirabello on the west by a low chain of hills,³ which one must cross in order to reach Kavousi's nearest harbor, "Deepsand" (Παχία Ἄμμος), at the southeast corner of the gulf. The plain is laid out in olive groves and fields of wheat and barley.

In this little corner of Crete, sea, plain, and mountains meet in the perfect combination for which Greek lands are famous. But beauty alone would not have attracted settlers to the spot

¹ Raulin, *l.c.* I, p. 165, writes of this plateau, where he locates "le village d'été de Krephti" (a mistake for Thriphte, Θρίφτη), "le sol formé principalement par des talschistes grisâtres est entièrement occupé par des vignes qui s'élèvent jusqu'à 980 m., plus haut que partout ailleurs en Crète et à la même hauteur que sur les flancs de l'Etna." Compare I, p. 215, "Les vignobles . . . existent dans les hautes plaines jusqu'à 700 m. à Askypchos, 900 m. à Lassiti, et même 980 m. à l'Aphendi-Kavousi."

² Compare Raulin, *l.c.* I, p. 164. He is describing the view which one has soon after leaving Kritsa, on the road to Hierapetra. "La vue est fort belle tant sur l'isthme lui-même, le golfe de Mirabello, que sur les montagnes de Lassiti à l'Ouest et la grande muraille calcaire que s'étend à l'Est, de l'île de Psyra jusqu'au cap Peristera et par dessus laquelle s'élève la masse conique de l'Aphendi-Kavousi." Also I, p. 361: "Le massif de l'Aphendi-Kavousi s'étend d'une mer à l'autre, c'est un plateau terminé sur son bord O-N-O par une pente très rapide avec de fréquents escarpements. De la plaine de Hierapetra, et du vallon d'Episkopi, on croit voir une muraille surmontée d'une plateforme sur laquelle dans la partie orientale s'élève le cône de Kavousi."

³ The height of these hills is given by Raulin, I, p. 363, "colline côtière à l'O. de Kavousi (niveau) 271 m."

for three thousand years. The place has received another gift from nature,—an excellent strategical position commanding four important roads: the first leads west to Herakleion; the second crosses the isthmus south to Hierapetra and the Libyan Sea; the third, by a pass east through the mountains, reaches Upper Sitia;¹ the fourth, following the coast to the northeast, makes connections with the harbors at the east end of the island. These four roads are all natural highways and must have been used from the earliest times.

If, from this brief description, the lay of the land is clear, and if we bear in mind the fact, which is now pretty well established for Crete as for Cyprus, that the people of the Bronze Age preferred to dwell in the lowlands, while their ruder successors at the opening of the Iron Age retired to the mountains for security, we may expect to find Mycenaean and pre-Mycenaean remains in Kavousi plain, and Geometric settlements on the heights above. Such was our experience of last spring.

At a place called "St. Antony's" (*Ἅγιος Ἀντώνιος*), in the line of low hills to the west of the plain, we began our excavations. The hillside is steep and very rocky. Our first aim was to dig back of a well-preserved piece of Cyclopean wall, in hope of finding a building. Three trial pits were sunk here with no results, and probably this is an ancient terrace-wall like those at Goulas. On a terrace about 15 m. above the foot of the hill we dug nine pits averaging 3 m. long, 1.75 m. wide, and 1.35 m. deep, down to the live rock in every case. At about 0.30 m. below the surface we came upon fragments of pottery, and these continued to a depth of about 1 m., where they stopped, except in the case of pit No. 6, where we found them as deep as 1.80 m. These fragments deserve study. They include many pieces of coarse unglazed ware, parts of large jars and of pithoi, some of them imperfectly baked. These are without pattern except in

¹ Compare Spratt, *Travels and Researches in Crete*, I, p. 157: "From Vasiliki the northern road follows a valley opening into the Gulf of Mirabello, to the northeast to Kavousi, whence begins the ascent, and by a difficult and rocky mule-path, the mountain barrier to the Sitia is surmounted by a pass."

two instances, — one a coarse incised herring-bone pattern on the rim of a pithos, the other a moulded wave-pattern laid on to a jar. There are also many fragments of finer ware, which fall within the series of Island Pottery, best illustrated by the finds of the British School at Phylákopi.¹ The best specimen is a small bowl about 4 cm. high,² of fine light lemon-yellow clay, glazed, with a pattern of bands and wavy lines painted in black. Among the decorations, which are painted in red and black on this finer pottery, are bands, dots, and spirals, several plant designs, and a dotted fish-scale pattern. In some of the spiral designs a white line is painted on the red, following the curve. The fish-scale pattern was found on five fragments that must have formed part of a large jar. The clay is pink, with a slight glaze, on which the pattern is painted in reddish black. Unfortunately we found at St. Antony's only broken pieces, and these lying haphazard in the midst of rocks, — pieces of the same vase were unearthed 10 m. apart. The inference is that at a very early date this broken pottery was thrown in to help build the terrace.

Although these potsherds gave proof enough that a settlement of the Bronze Age lay somewhere in the plain, I did not feel justified in spending much of the short time at our disposal in looking for it, since the indications above ground were very slight. We therefore turned our attention to the heights above the village, where we were sure of finding remains of the Geometric period.

Earliest in date are a house and a necropolis of small tholos-tombs on "Thunder Hill" (*Βρόντα*). This hill lies south-south-west of Kavousi, and rises to about 330 m. above the sea. Our workmen began digging on the top of the hill, where many bits of ancient wall appeared above the surface. The space excavated was about 20 m. \times 15 m. Below the crest of the hill, on the southeast side, is an excellent stretch of wall (1.20 m. high, 13 m. long), and above this what appears to be a storeroom, where

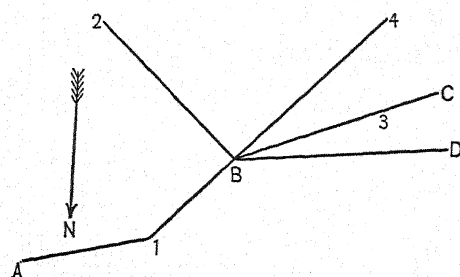
¹ *Annual of the British School*, vols. III, pp. 1-30, and IV, pp. 17-48.

² This is figured on PLATE II, the first piece from the left on the top row.

parts of three large pithoi with moulded designs of the common serpentine patterns were found. Of the principal building on the summit little can be said. It seems to be a large house with a forecourt, but the plan cannot be made out in the present ruined condition of the walls. One room contained a considerable amount of iron, one pick, one axe-head, a sword complete in seven pieces, and numerous fragments.

While the rest of the workmen were engaged in clearing the summit, with little reward for their labor, four men had been set to work in two pits, which we thought might be ancient wells. They soon proved to be ruined tholos-tombs.¹ The first (Tomb A) had been thoroughly ransacked and yielded one soapstone whorl only; the second,² although partly fallen in, was protected by several large blocks of stone, and to this accident we owe the recovery of thirteen vases practically entire, two bronze rings, two terra-cotta whorls, and many good frag-

¹ The relative position of the tholos-tombs on Thunder Hill is shown by the accompanying diagram. Scale 1:1000. Letters indicate empty tombs; numerals indicate tombs which contained vases. The tombs



are rudely constructed of unhewn stones, bonded with clay. The average dimensions are: diameter, 2.10 m.; height, 2 m.; height of entrance, 0.35 m.; length of lintel, 1 m.; width of dromos, 0.80 m. In point of construction, Tomb B is the best. Here the lower courses form a rude square, measuring

about 2 m. on a side, made of stones of good size, fairly regular in shape. At a height of 0.67 m. the square has become a circle, and the dome begins, built of small, more irregular stones. The top is broken in, but the height of the tomb must have been about 2 m. The dromos is 0.85 m. broad; the height of the entrance is 0.80 m.; the lintel is 1.10 m. long, 32 m. thick, and 0.75 m. wide (broken in two pieces).

² Contents of Tomb 1, Thunder Hill, in addition to thirteen vases, were:

- a. Bronze ring, with small hooked points, diameter, 0.035 m.
- b. Bronze ring (hooks broken), diameter, 0.02 m.
- c. Clay whorl, walnut pattern, diameter, 0.017 m.
- d. Clay whorl, plain, diameter, 0.025 m.

ments of pottery. Parts of three skeletons, including one skull in good preservation, were taken from the tomb. In the course of the afternoon, three more tombs were discovered. Of these, two yielded nothing (Tomb C and Tomb D); the third¹ still contained a bronze hairpin, parts of bronze fibulae, pieces of iron blades, and an iron hilt, as well as ten vases and numerous fragments, some of which can be fitted together. It is strange that anything should have remained, for the upper half of the tomb was entirely destroyed and the lower half was filled with the fallen stones.

On the following day, two boys were digging in a place which appeared to me quite unpromising; they were new at the work and I did not like to transfer them at once to another spot for fear of discouraging their zeal, which was admirable. The trench they were digging was blocked by a pile of stones jutting in irregular lengths at all angles. Suddenly it was discovered that by removing these stones they had made a window in the side of a "bee-hive" tomb. The tomb² remained as it

¹ Contents of Tomb 2, Thunder Hill, in addition to ten vases, were :

- a. Bronze hairpin, 0.105 m. long.
- b. Bronze fibulae (broken).
- c. Bronze fragment, shaped like a fish-hook, probably the end of a pin or ring.
- d. Iron hilt (broken).
- e. Iron blades (broken).

² Contents of Tomb 3, Thunder Hill, in addition to a pithos and forty vases, were :

- a. Bronze bracelet, diameter, 0.065 m.
- b. Bronze fibula, 0.05 m. long.
- c. Bronze fibula, 0.08 m. long.
- d. Bronze fibula, 0.058 m. long.
- e. Bronze fibula, 0.07 m. long (point broken).
- f. Bronze fibula, broken in two pieces.
- g. Bronze ring, 0.02 m. diameter.
- h. Iron spear-head, with broad blade.
- i. Iron sword-handle.
- j. Iron sword-point, 0.14 m. long.
- k. Iron spear-head, hollow.
- l. Soapstone whorl, with two holes.
- m. Clay whorl in form of truncated cylinder, with two incised rings; height, 0.018 m.; diameter, 0.02 m.

had been left almost three thousand years ago. Looking in, we saw a large pithos,¹ whole, lying upon its side surrounded by vases, with four skeletons stretched out beside it, their heads toward the south, away from the dromos. Three of the skulls are well preserved, the fourth is partly disintegrated. In the jar there were no bones — nothing, in fact, save earth, a small quantity of black ash, a broken bronze fibula, and three pieces of iron blade. There was no regularity in the placing of the vases; some of the smaller were set inside larger ones. Forty vases were handed out through the "window" made by the pick, but it was necessary to open the tomb from the top in order to remove the pithos without breaking; for although the huge jar must have been brought in through the dromos, it could not be taken out that way with safety. With the vases were found parts of iron swords and spear-heads, a clay whorl, and a soapstone whorl; and when the earth which had drifted into the tomb was sifted it yielded a bronze bracelet, five bronze fibulae, and a bronze ring.

Finally, some distance to the south, we excavated a space which is called by courtesy a tomb (No. 4), because of the presence of a lintel and a few stones that formed the sides of the dromos. The rest of the tomb has vanished, but by a miracle eighteen vases wedged in between fallen stones were saved, and among them are some of the best pieces from Thunder Hill. We also recovered from this place one bronze fibula and parts of two others, two bronze rings, a bronze hairpin, three pieces of thin bronze plate with an

¹ Pithos, height, 1.11 m.; six handles, three above and three below; four raised bands, the three upper ones decorated by herring-bone pattern incised, the lowest by vertical lines incised; around the neck of the jar, an amulet. Three small square holes have been cut on one side of the vase, one above the other, in the spaces between the raised bands. These may have served as spigots if the pithos was originally intended for household use, or they may have had a use similar to that of the round holes in the bottom of the ossuaries found at Anoja Messaritica, "qui semblent avoir été percés afin de pourvoir à l'écoulement des liquides nés d'une matière en décomposition," Perrot et Chipiez, *Histoire de l'Art*, vol. VI, p. 953. For the use of pithoi as funerary urns, see *Ath. Mitt.* XVIII (1893), pp. 133 and 134.

indented pattern, fragments of bronze and iron, and a soapstone whorl.¹

The pottery from Thunder Hill is being studied by Miss King, the present Hoppin Fellow at Athens, and I shall leave to her all detailed description of the vases, confining myself to a few general remarks on form and decoration. (Cf. PLATES I, II.) The shapes are Mycenaean or even earlier; they include three false-necked amphorae (*Bügelkanne*), three bird forms, two gourds, primitive amphorae without base, jugs which are variants of types found at Troy,² a teapot form which is Mycenaean, low jars developed from a type found at Tiryns³ and in pre-Mycenaean graves at Corinth,⁴ "a flat bowl with sharply recurved rim," resembling the Melian bowls,⁵ a two-handled cup closely resembling cups from Mycenae and Rhodes,⁶ and finally, numerous examples of the primitive crater.⁷ But although the shapes of these vases were already popular in the Bronze Age, their decoration belongs to the period which followed; yet in the Geometric designs painted on them we observe that curved lines are still preferred to straight, indicating a time not long subsequent to the Mycenaean.

This early date receives further confirmation from the metal finds. In the bronze fibulae (Fig. 3) we have an interesting

¹ Contents of Tomb 4, Thunder Hill, in addition to eighteen vases, were :

- a. Bronze fibula (point broken), 0.093 m. long.
- b. Bronze ring, with small hooked points and knob at middle of the hoop, diameter, 0.025 m.
- c. Bronze ring (one hook broken), diameter, 0.025 m.
- d. Bronze hairpin (end broken), 0.072 m. long.
- e. Two bronze fragments, shaped like fish-hooks.
- f. Three pieces of broken bronze plates, with indented pattern and holes for fastening.
- g. Fragments of bronze and iron.
- h. Soft soapstone whorl, diameter, 0.02 m.

² Perrot et Chipiez, *Histoire de l'Art*, vol. VI, p. 900.

³ Schliemann, *Tiryns*, Fig. 7.

⁴ *A. J. A. Second Series*, I (1897), p. 320, I, 11, p. 321, II, 2.

⁵ *Annual of the British School*, IV, pp. 36 and 43.

⁶ Perrot et Chipiez, *Histoire de l'Art*, vol. VI, p. 549.

⁷ Orsi, *A. J. A. Second Series*, I (1897), pp. 252 ff.

development of style from the earliest examples, which, like certain brooches discovered by M. Kavvadias in a cemetery at Salamis, are made on the primitive pattern¹ (except that the bow

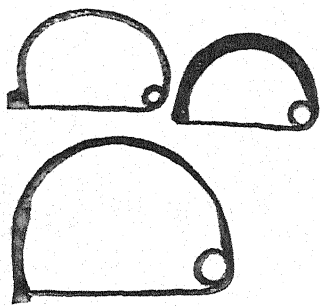


FIGURE 2.—FIBULAE FROM TOMB 3, THUNDER HILL.

is much more bent), to a second variety with a twisted bow, and to a third which has the bow flattened. A simple form of ornamentation occurs on the bronze bracelet (Fig. 3), where the metal is drawn out, twisted, and knotted. One ring is circular, the others have hooked ends which clasp; in two instances there is a knob at the middle of the hoop (Fig. 3). Turning

from the bronze ornaments to the iron weapons, we are surprised by the modern appearance of the pickaxe, but its claim to antiquity cannot be disputed, since one exactly like it was taken from the tholos-tomb discovered by Theodosios Mitsakis. The iron sword (Fig. 4) is of an early pattern following close after the Mycenaean; hilt and blade are of one metal, but a reminiscence of the days when a blade of bronze was inserted in a hilt of wood, ivory, or bone, lingers in the sharp outlines of the handle and the raised rim, which is continued on the upper part of the blade as if enclosing it. All indications justify us in assigning the house and tombs on Thunder Hill to the sub-Mycenaean epoch, transitional between the Bronze Age and the Iron Age.²

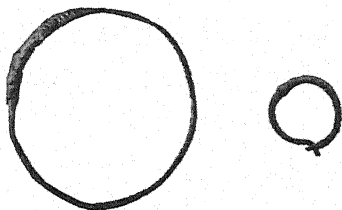


FIGURE 3.—BRONZE BRACELET FROM TOMB 3, THUNDER HILL: BRONZE RING FROM TOMB 4, THUNDER HILL. — Scale $7\frac{1}{2}$:20.

¹ Tsountas and Manatt, *The Mycenaean Age*, p. 163, Fig. 57.

² For characteristics of this epoch in Cyprus, see Myres and Richter, *Catalogue of the Cyprus Museum*, p. 21. Cf. Orsi on "A Mycenaean-geometric transitional vase" in the museum at Herakleion, *A. J. A.*, Second Series, I, pp. 252 ff.

Of somewhat later date is a little castle perched at the extreme northern end of the Thriphte range which, as has been said, rises like a wall behind Kavousi. This peak has long been called "Citadel" (Κάστρον) by the peasants, because of the ancient walls which they noticed on its steep, rocky sides. On the adjacent slope, Πλαγὶ τοῦ Κάστρου, is situated the tholos-tomb which was reported to Mr. Evans. Comparing Mr. Evans's estimate with my own and with altitudes given by Raulin and Spratt for other points in the same range, I have given 700 m. as the approximate height of the Kastro above the sea. The upward slope from the slight eminence on which the village stands is exceedingly steep. It took our mules more than an hour to make the ascent, and at one point it was necessary to dismount for pity's sake, as well as for safety. At the Ridge, the mules had to be abandoned, and the top was reached by a hand and foot scramble. This summit is 70 m. long north and south, and 40 m. wide east and west. On the north the descent is precipitous; the western slope is also very steep, only one small terrace can be cultivated; on the eastern side the ground falls less abruptly, and at several points has been terraced and planted with barley. The only approach is from the south by way of the Ridge.

On this almost inaccessible height an early chieftain built his house (Fig. 5). The thirteen rooms uncovered by us occupy the entire width of the summit and about two-thirds of its length. The southern end of the peak is far too rugged for building purposes, and even in the northern part seven different levels were necessary, rising from north to south, as is shown by the vertical section which accompanies the plan.



FIGURE 4. — IRON
SWORD FROM
HOUSE, THUNDER
HILL. — Scale
 $3\frac{1}{4}$:20.

Probably these rooms do not all belong to one house, but there is no difference in their construction that would permit us to assign some to masters and others to servants, as at Tiryns. Rooms 10, 11, and 12 are more irregular than the others, but this is probably due to the lay of the land only, since in Room 11 were found some of the best fragments of pottery. We are left quite in the dark as to the use of the various rooms, for the plan of the house is rambling, following no canon of courts and forecourts, and there is not a single hearth, bath, or column-base to guide us, nor did we receive any certain light from the potsherds and few household objects which were turned up by the spade.¹

Doors and stairs are but scantily provided. Of the latter, the flight at *a* is excellent; the stairs at *i* are not so good, while those at *k* are marked "steps" in deference to the opinion of the workmen rather than from my own conviction, for here the stones stand at a sharp angle and cannot have been laid in this position, although they may have been used for going up and down. A good corridor leads along the

¹ In the northeast corner of Room 2, at point *c*, there is a rock platform nearly square (1.50 m. \times 1.40 m.), raised a few centimetres above the threshold to the east.

It has been suggested that Room 6 may have been a portico. The wall which we found standing, from *e* to *f*, was of wretched construction, evidently built later than the other walls. When destroyed, it left a clean end at *f*, and a good threshold from *e* to *f*. On this threshold may have stood a wooden column to support a porch roof. The approach would then have been from the corridor by means of steps and a platform cut in the natural rock, of which we have remains at *d*, through the portico and the door *g* to Room 5.

In Room 7 we came upon a number of terra-cotta and stone weights used for weaving. This may have been a workroom for the women of the family.

In Room 8 a large pithos was found almost complete, similar to those in the storerooms of the palace at Cnossus.

In space *h*, at a depth of 0.50 m. below the level of Room 6, we came upon many potsherds (among them the top of a "stirrup jug" and coarse pieces with moulded patterns); charcoal was mixed with the sherds. At point *h* there is a natural cleft in the rock, which would make an excellent hearth. This was full of charred earth and pieces of inferior pottery that seemed to be parts of cooking-vessels. Possibly we have here the kitchen of the establishment.

On the earthen floor of Room 11, blocks of stone are laid so as to form an oblong 0.75 m. \times 0.60 m. We raised the blocks, but found nothing under them.

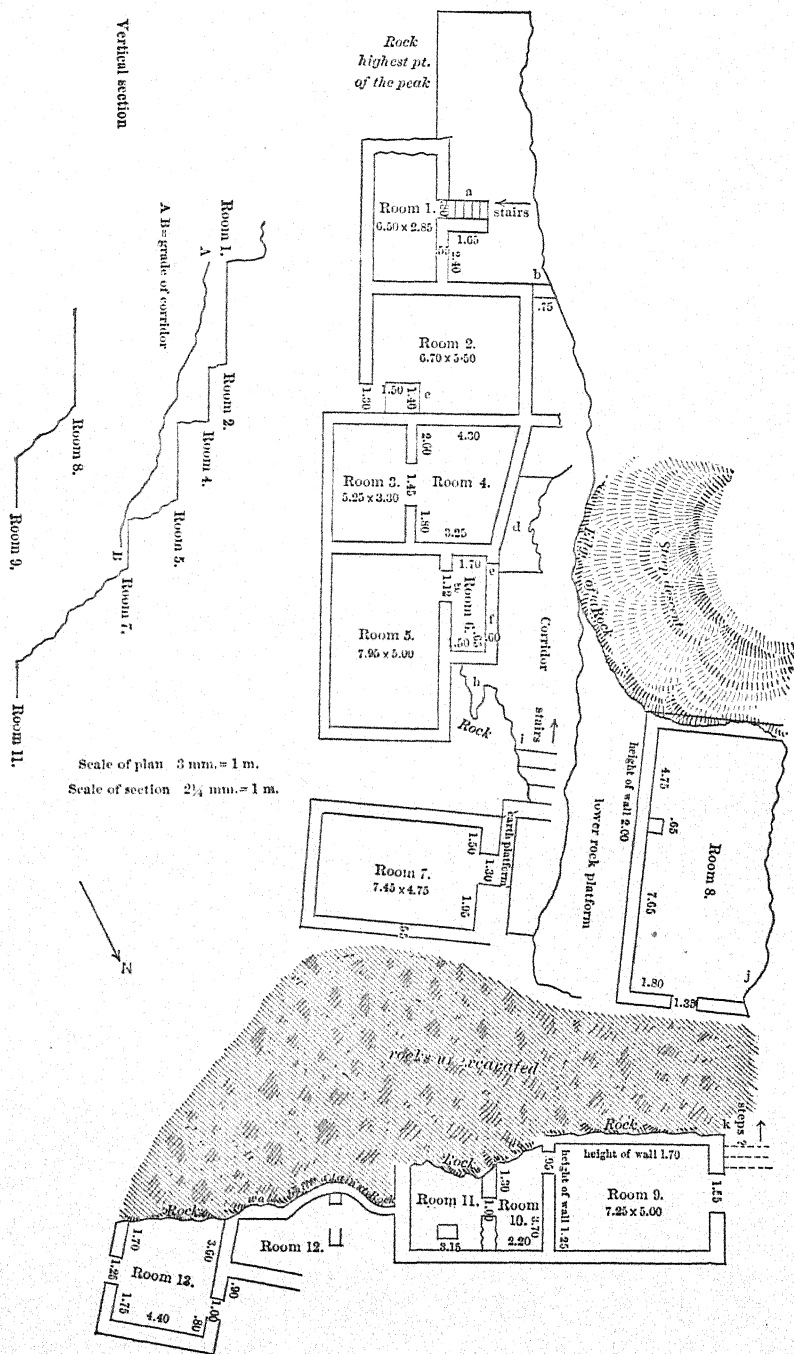


FIGURE 5.—CITADEL OF KAVOUI. PLAN AND VERTICAL SECTION.

west side of the upper buildings, and probably there was one on the eastern side also, but here the ground has fallen away, carrying with it the eastern walls of several rooms and leaving no trace of an approach from this direction except a good doorway in the northeast corner of Room 2. Such a corridor, with doors leading from it, would have given access to Room 3 and indirectly to Room 4, which are at present entirely cut off.

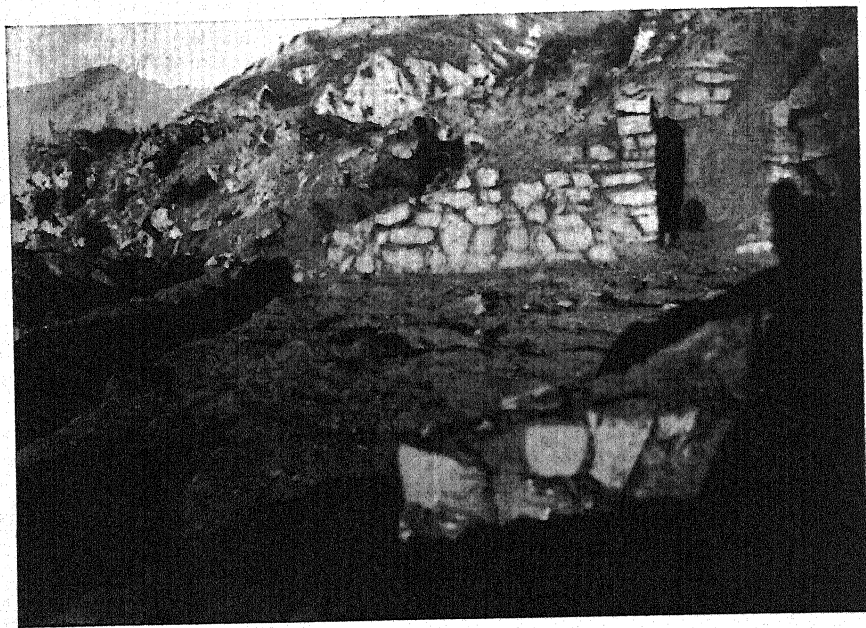


FIGURE 6.—CITADEL OF KAVOUSI: WALL AND DOORWAY BETWEEN ROOMS 9 AND 10.

The uneven line to the right of the plan represents the edge of the rock. Room 8 occupies the whole of a second platform 3.20 m. below the level of Room 7, and Rooms 9, 10, 11, and 12 are on a still lower level, from which the rock descends precipitously on the north. A good piece of wall was excavated just below point *j*. The spaces between Rooms 5 and 7 and between Room 7 and the lower series of rooms have not been dug out; they seem to be mere masses of rock. The walls of the buildings have an average thickness of 0.50 m., and are of

wretched construction, being built of slabs of local shale bonded with clay (Fig. 6).

Among the objects¹ used by the dwellers on this peak were milk-bowls of the type described by Myres and Richter in their *Catalogue of the Cyprus Museum*, false-necked amphorae of the well-known Mycenaean form but with Geometric decoration, trumpet-shaped funnels of coarse clay, admirably adapted for drawing liquids from large pithoi, stone and clay weights for looms, a soapstone knife-sharpener, pumice for cleaning knives, large stones for bruising corn, and stone bowls for pounding corn. That these mountaineers enjoyed quiet amusement is proved by a stone and clay "counter" found in Room 1 (Fig. 7), which must have been used for some game like draughts or roulette. The stone is a slab of shale 0.115 m. thick, which forms a rude square with a diagonal of about 0.50 m. On this stone a circle is marked, and within its cir-

¹ The single objects found on the Citadel were as follows :

- a. Stone table for a game (fully described above).
- b. Whorls: one of soapstone, diameter, 0.035 m.; four of clay, diameter about 0.02 m.
- c. Four round clay blocks, diameter, 0.04 m. to 0.08 m.; thickness, 0.01 m. to 0.025 m. (one with incised lines).
- d. Oblong soapstone block (for sharpening knives?), 0.07 m. long, 0.04 m. wide, 0.03 m. thick; two grooves 0.005 m. deep, forming a Christian cross, are cut on one face of the block.
- e. Soapstone knife-sharpener, 0.195 m. long, 0.03 m. wide, 0.025 m. thick.
- f. Bronze rivet, diameter, 0.014 m.
- g. Stone ring-weight, diameter, 0.09 m.; thickness, 0.035 m.
- h. Clay weight in form of truncated pyramid, with square base 0.10 m. on sides; height, 0.13 m.; suspension hole, 0.055 m. above base. Also two pieces of a similar weight, broken across through hole.
- i. Round clay weight, hole in centre.
- j. Body of stag (?) in terra-cotta, 0.06 m. long, 0.035 m. high.
- k. Clay funnels, trumpet-shaped:
 - (a) 0.21 m. high (top broken).
 - (b) 0.25 m. high (broken half across bottom, and handle broken).
 - (c) 0.18 m. high (ends and handle broken).
- l. Large stone for bruising corn.
- m. Three stone weights with holes.
- n. Three pieces pumice stone.
- o. Rudely spherical stone, greatest diameter, 0.047 m. Rudely circular stone, greatest diameter, 0.075 m.; thickness, 0.025 m.

cumference are ten round "holes," made by scratching circles and scooping out their centre; the "board" is divided into halves by a straight line, five holes on each side. At the ends of the dividing line and in the centre of the circle there is a rude attempt at decoration by oblique lines. The clay



FIGURE 7.—STONE TABLE FOR GAME AND GAME COUNTER FROM CITADEL, ROOM 1.

Length, measuring along line, .50 m., thickness, .115 m. Game counter: diameter, .033 m., thickness, .0015—.002; of clay, light pink—stripes in bluish black.

counter (diameter, 0.033 m.; thickness, 0.002 m.) exactly fits the holes in the stone. We have here, I believe, the earliest circular "board" yet found in Greek lands. The dividing line reminds us of the *ἱερὰ γραμμὴ* of *πέσσοις*, the game which is being played by the Ithacans when Athena visits Telemachus

(Hom. *Od.* I, 107), the only game whose Greek authorship was undisputed (Herod. I, 94).

Many fragments of pottery prove by their designs that the buildings date from the Geometric period. Concentric circles are of frequent occurrence; a row of them is found on two fragments which give parts of a floral design that seems to be an inheritance from an earlier art. We found only one entire vase on the Citadel. This was an amphora, made of inferior clay, unglazed, undecorated, which fell into many pieces as soon as the earth about it was withdrawn. Two small funnels,¹ partially broken, of light grayish brown clay, thin, unglazed, decorated with incised rosettes sparsely scattered on the field, attract attention by their delicacy, but in general the pottery is coarse, such as would befit the daily use of a rude people.

The lord of this castle seems to have saved his best to be buried with him in a tholos-tomb which lies about half a mile southeast of the Kastro, on "Rusty Ridge" (*Σκουριαζμένος*). The rediscovery of this tomb was the most important result of our work at Kavousi, since in point of construction and in the character of its contents it represents a higher stage of civilization than any other of the remains which have come to light in that neighborhood. I say "rediscovery" because a peasant found the tomb forty years ago by accidentally removing the capstone and falling into the vault. Badly frightened as well as hurt, he did not at first remove the treasure which was in the hole. Little by little, the secret leaked out; an antiquity dealer from Herakleion is said to have bought ten vases, and these are probably in European collections to-day; a clever priest took many swords, vases, etc., and sent them to his son, a priest of the Holy Sepulchre, who is supposed to have disposed of them in Jerusalem; several villagers claim to have had knives and jars from the same treasure. At length, having removed all the objects which seemed to him of value, the peasant replaced the slab and built

¹ These are figured on PLATE II, the second and third pieces from the left on the top row.

his house above it, without knowing anything of the real nature of his discovery. Mr. Evans had heard rumors of a "cave" near Kavousi, and in mentioning it to me, he added, "Don't depise caves; the best things in Crete have been found in them." When I learned from the villagers that the "cave"

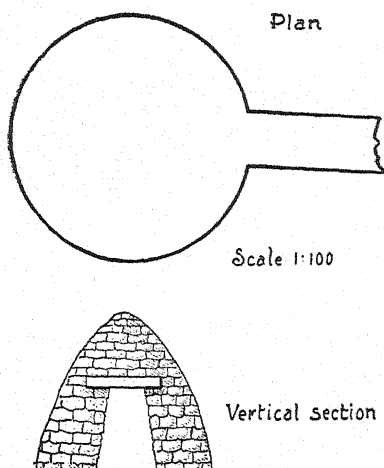


FIGURE 8. — BEEHIVE TOMB AT RUSTY RIDGE NEAR KAVOUSI.

was nothing but a "hole in the ground" under a peasant's house, it seemed hardly promising. Yet I determined to look into it, and by the Demarch's order, Michael Kassiotis opened his house to us and pointed out a large slab which, he said, covered the "hole." In order to remove the slab it was necessary to destroy part of his wine-vat, which was well built and cemented. The wisdom of doing this seemed doubly doubtful, because he

assured us that everything had been taken out of the "hole" years ago. Curiosity prevailed, however; the slab was raised, and we were rewarded by the sight of a "beehive" tomb, whole and of excellent construction (Fig. 8). The dimensions are:

Diameter, 2.90 m.; height, 2.20 m.

Width of entrance below, 0.70 m.; above, 0.38 m. Height of entrance, 1.10 m.


Length of dromos, as far as cleared, 1.70 m.

The lintel is a single stone, curving inward. Its length as far as it protrudes from the wall is 0.88 m.; thickness, 0.08 m.

There are eleven courses of stone below the lintel and twelve above.

The average size of the stones is: length, 0.40 m.; thickness, 0.08 m.; their width could not be determined as there is no break in the wall. The stones are not hewn, but are fairly regular in shape; the chinks are filled not with smaller stones, but with earth.

The floor is earth.

The capstone is a slab measuring in greatest length, 1.17 m.; greatest width, 0.70 m.; thickness, 0.09 m. Shape .

A first glance showed that although the tomb had been ransacked, not everything had been taken.¹ Two of our best workmen went down and by torch-light cleared the tomb completely. We were able to recover a hydria, a barrel-shaped

¹ Contents of the tomb on Rusty Ridge were :

- a. Hydria, 0.054 m. high ; clay, pink, with lemon-yellow slip ; decoration in black ; two panels on shoulder, on one side three women with arms upraised ; on the other a man, lash in hand, driving a chariot. (Put together out of more than thirty-five pieces.) (PLATES III, IV.)
- b. Barrel-shaped vase with four handles, 0.37 m. high ; clay, pink ; decoration in lustrous black, turning to red ; the concentric circles and the stripes on the handles are in white paint ; two panels between adjacent handles have a swan, the two others are plain. (Put together out of more than twenty pieces.)
- c. Amphora with two handles, each handle in three parts ; lower half of amphora gone ; the remaining part is about 0.35 m. high ; clay lemon-yellow ; decoration bluish black.
- d. Amphora same height, same description as c ; only one side remaining.
- e. Gold button : diameter, 0.02 m. ; height, 0.009 m.
- f. Blue glass bead, translucent, diameter, 0.018 m. ; height, 0.01 m. Also six whole beads and one broken bead of this same style, more or less translucent.
- g. Bronze arrow-head, 0.049 m. long, two barbs.
- h. Bronze arrow-head, 0.057 m. long, one barb damaged.
- i. Two pieces of gold leaf, no pattern.
- j. Two pieces of very thin translucent blue glass.
- k. Nine pieces of thin bronze plate, with design of men and beasts. (Figs. 10, 11.)
- l. Nine pieces of thin bronze plate, curved surfaces, with beaded edge, probably parts of greaves.
- m. Two iron swords ; two iron sword-handles ; one iron sword-point ; two parts of iron sword-blades ; one iron sceptre-handle (?) ; two pieces of iron and one of bronze, use unknown.
- n. Seven iron lance heads, hollow at lower end, in some instances still containing bits of the wooden shaft ; two iron axe-heads ; one stone axe-head ; three pieces of silver lead ; one bronze hook ; many broken pieces of iron.
- o. Broken vases (in addition to the ones mentioned above) and many fragments of pottery. The Geometric patterns on these fragments are of great variety. One P-shaped pattern — which, if not unique at Kavoushi, is at least extremely rare — occurs also on sherds from the Citadel, and helps to establish a close connection between the tomb and the Citadel buildings.
- p. Several bones of animals, among them a boar's tusk.

In addition to the above objects, which we ourselves took from the tomb on Rusty Ridge, we obtained from the villagers, Michael Kassiotis and Christodoulos

jar with four handles, two erect and two horizontal, parts of two amphorae interesting for their decoration, parts of other vases awaiting reconstruction, numerous fragments of pottery, as well as iron swords, spear-heads and belt attachments, bronze arrow-heads and plates of bronze. There were no fibulae, but a single gold button remained, also pieces of gold-leaf, of translucent blue glass, and beads of blue glass more or less translucent;

fragments of the so-called Egyptian porcelain seem to indicate transmarine connections.

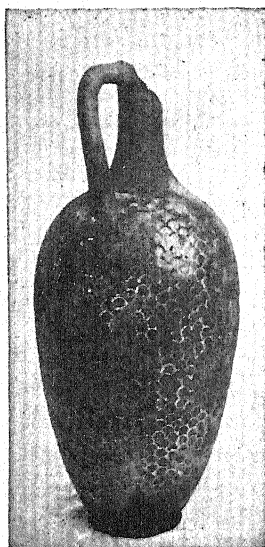


FIGURE 9. — JUG FROM BEEHIVE TOMB ON RUSTY RIDGE.

In these finds, the Geometric style is fully developed (see above, pp. 126, 127); sword hilts are of a later type than the one shown from Thunder Hill. The vases are of more advanced form, have a good glaze over the pink clay, and are elaborately ornamented. A swan of the familiar Dipylon style occurs on the barrel-shaped jar above mentioned. The most interesting vase is the hydria, on one side of which the artist has painted three mourning women, on the other a man driving a chariot, probably a pair, although only one horse is seen (PLATES III, IV). This is the first

Geometric vase with human figures to be found in Crete. These subjects, as well as the general ornamentation of the hydria, recall Athenian vases in the Dipylon style, but there

Saridamichaelakis, three vases which had been previously taken from the same tomb, and which were being used by these men to hold wine and oil.

- a. Hydria, 0.54 m. high (top broken); clay, light pinkish yellow; decoration in black.
- b. Jug with double braided handle, 0.44 m. high; clay, light pinkish yellow; decoration in black.
- c. Jug, 0.37 m. high; clay, light red, covered with lustrous black slip; decorated with fish-scale pattern, painted in white. (Fig. 9.)

are differences, and differences which may come to be considered as characteristic of Cretan art: first, the survival of Mycenaean influence in the rhomboid, each point finished with a double scroll, a pattern which Wide has already discussed in his "*Nachleben Mykenischer Ornamente*," where he traces it back to Mycenaean gold ornaments; second, the greater naturalism of the figures, both human and animal, as compared with the Dipylon figures. A similar fact has been noted in comparing the Mycenaean finds at Cnossus with those from the mainland.

Of special interest are fragments of thin bronze plate engraved with a well-executed design (Figs. 10, 11). The motive is Oriental, but the style is Greek. The field is divided into bands, Oriental fashion, and is filled with sphinxes, having back-turned, helmeted heads; griffins with upstretched necks (a fine heraldictype), and a recurring combination of a man, with one or two lions rampant. With perfect mastery of his art, the engraver has given individual expression to

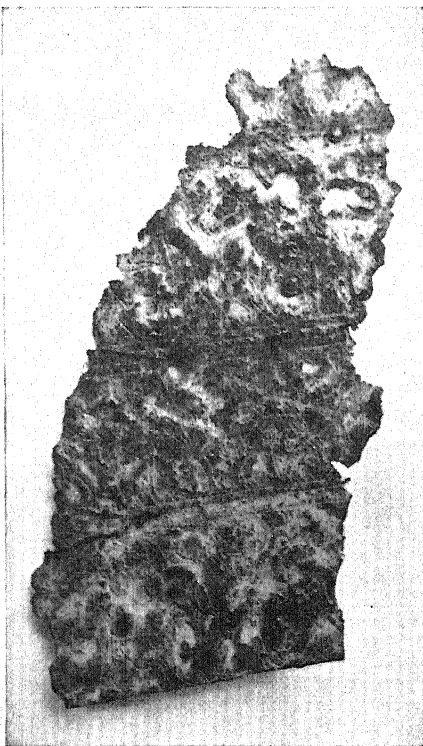


FIGURE 10. — PIECE OF BRONZE PLATE FROM BEEHIVE TOMB AT KAVOUSHI. (Compare Figure 11.)

each figure; one of the lions is especially remarkable as a picture of snarling resistance, executed in miniature with a few lines; the human figures are strong, lithe, and dignified. The style appears to me to resemble that of a gold diadem found in a grave at the Dipylon, to which Brückner and

Pernice in the *Athenische Mittheilungen* for 1893, ascribed a Greek origin.¹ Evidently the mountain chieftain buried in this tomb was a man of taste.

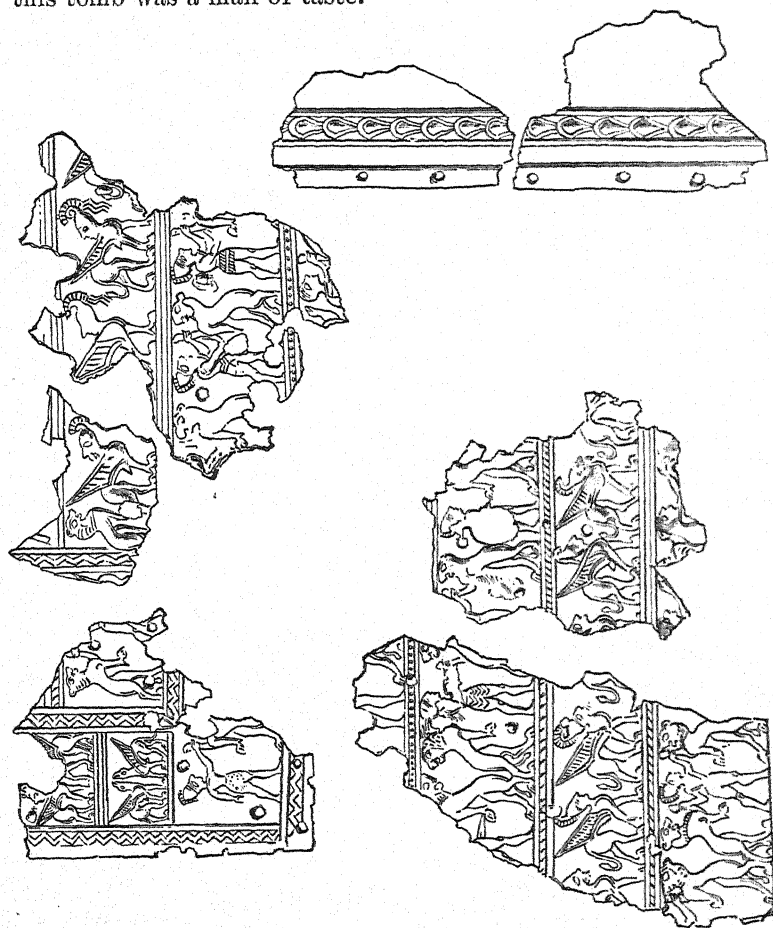


FIGURE 11. — DESIGNS ON BRONZE PLATE FROM BEEHIVE TOMB AT KAVOUSI.
Drawn by E. Gilliéron. (Compare Fig. 11.)

¹ Brückner and Pernice, 'Ein Attischer Friedhof,' *Ath. Mitth.*, XVIII (1893), pp. 73-191. The gold diadem is given on p. 109, Fig. 7. Compare also examples of gold *repoussée* work from the Dipylon, Collignon, *Hist. de la Sculp. Gr.*, I, p. 87, Fig. 43, and from Eleusis, Collignon, *Hist. de la Sculp. Gr.*, I, p. 88, Fig. 44, and examples of bronze *repoussée* work from Olympia, Collignon, *Hist. de la Sculp. Gr.*, I, p. 89, Fig. 45; E. A. Gardner, *Handb. of Gr. Sculp.*, I, p. 63, Fig. 2 (supposed to be Argive in origin).

Turning back to the southern slopes of the Citadel (Πλαγὶ τοῦ Κάστρου), one finds himself close to the terraced patch of barley where Mitsakis discovered the tomb whose contents Mr. Evans will publish. On this terrace and on three terraces below it our men dug in the hope of finding other tholos-tombs. Here and there they unearthed good ancient walls, which led —nowhere; the earth had all been “worked,” and was very loose, being full of stones, the ruins of broken-down tombs or houses. A few potsherds and some terra-cotta animals were our only reward.

These animals are sufficiently curious to excite interest as to the place where they were found. It is a rocky ledge 10 m. long by 4.50 m. wide, 40 m. northeast of the tomb just mentioned, separated from the terrace by uneven ground. Near its centre is a piece of old wall, partly fallen, 2.20 m. long, 0.65 m. wide, 0.50 m. high. A shorter piece of the same width and height, in better preservation, lies near the southwest end of the ledge, and in the southern corner there is another small section, 0.80 m. long, 0.60 m. wide, 0.50 m. high, built against the bank of rock and earth which forms the back of the ledge. These remains do not look like parts of a tomb, but favor rather the idea of a small shrine. The animals were found under light earth not deeper than 0.35 m. Much of the earth was black from having been burned, chiefly in a line between the first and third pieces of wall, especially in the southern corner; mixed with the charred earth were potsherds and bits of charcoal. The animals found on Citadel Slope are pictured in PLATE V. Beginning on the left of the plate, we have:

- a. Stag (?), front legs and tail missing; 0.16 m. high to top of head; 0.17 m. long from nose to tail.
- b. Bull's head; forehead, 0.12 m. broad.
- c. Bull (body and head stuck together, legs broken); 0.21 m. long, 0.245 m. high.
- d. Bull, sitting on haunches, legs broken; 0.31 m. high.
- e. Bull's head and neck; forehead, 0.095 m. broad.
- f. Bull's head and neck; forehead, 0.095 m. broad; curious mark \mp on face.
- g. Dog (?), one front leg, one ear gone; 0.085 m. high; 0.013 m. long.

In addition to these, there are three necks of bulls, with the pattern \approx incised, as in PLATE V *c* and *e*; the body of a bull standing, as in PLATE V *c*; the body of a bull sitting, as in PLATE V *d*, with a round hole in the top of the neck, as if the head had been fitted into it; the hind part of the body of a bull sitting, as in PLATE V *d*.

Contemporaneous with the house and tombs on the Citadel and Rusty Bridge are the oldest remains on Azoria Hill (Μουρί τ' Ἀζωργιά), southeast by east of Kavousi, north by north-east of the Citadel, about 330 m. above the sea. It is a hill with steep sides and round top, shaped like an old-fashioned sugar-loaf; a lower spur juts out to the north, and on the south there is a small plateau by which the top is reached from the valley. The etymology of the name Μουρί τ' Ἀζωργιά is difficult; the peasants do not try to explain it — “εἶναι τοποθεσία,” they say, — but I was told by the Eparch of Hierapetra that Μουρί means “hill,” and that Ἀζωργιά is another name for ἀνάγυρις, a shrub which grows in abundance on the hillside. Standing at the entrance of the gorge through which passes the road to Ronkaka, Azoria Hill commands the direct route between Central and Eastern Crete. One is not surprised, therefore, to find that it was occupied and defended in very early times. On my first visit to Kavousi, this site had especially pleased me, for the slope is covered with ancient walls, some of which deserve to be called Cyclopean, and on the top was a very promising earth platform. To this platform we directed our attention early in the campaign. The earth was light. A few hours' digging revealed intricate walls, a puzzling mixture of curves and straight lines. I shall not try to describe our surprise as one circle after another was cleared, or to mention even the conjectures to which they gave rise, but I will let the plan speak for itself (Fig. 12), adding only the necessary words of explanation.

The summit measures 20 m. north and south by 15 m. east and west. Almost in the centre (1 m. south of the centre) lies the middle point *A* of a circular building (‘Newest’ on the plan),

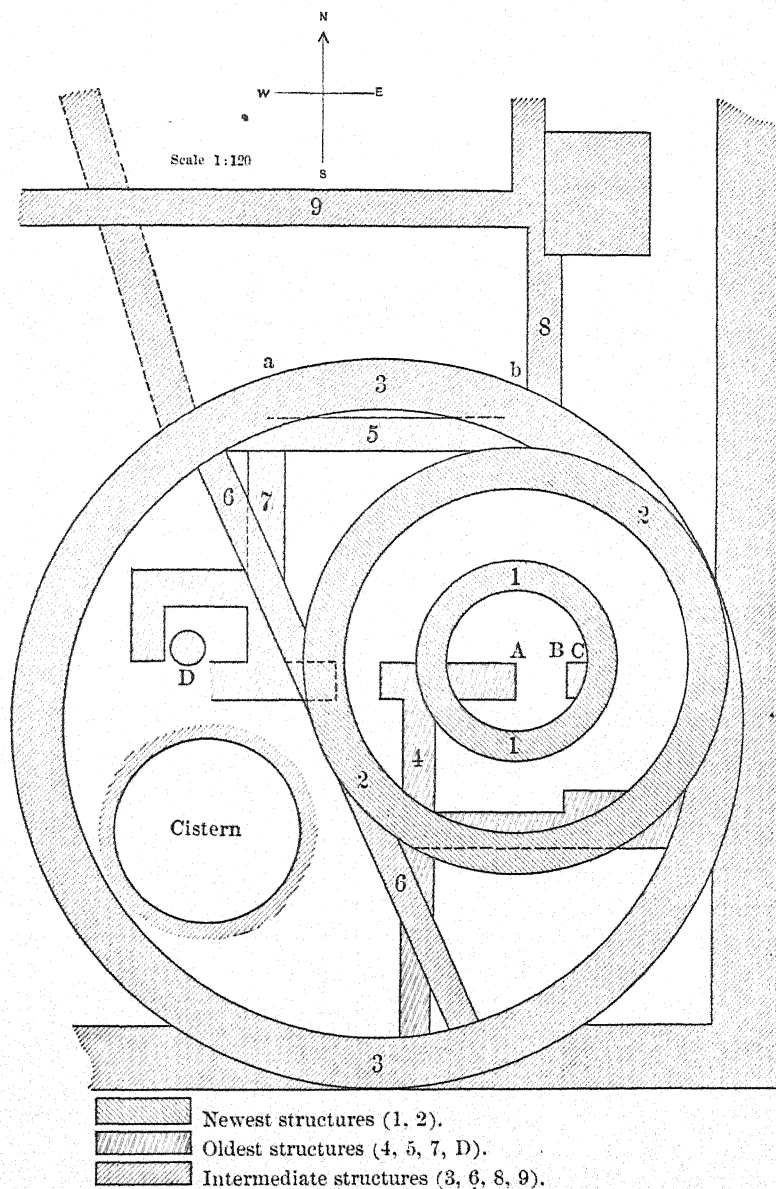


FIGURE 12. — PLAN OF BUILDINGS OF AZORIA HILL, NEAR KAVOULI.

which is, at the same time the most noticeable and the newest structure on the hill. This building consists of walls forming two concentric circles—the inner (1) has an inside diameter of 2.35 m. and is 0.50 m. wide; the outer (2) is of the same width and has an inside diameter of 5.35 m. Wall 1 (greatest height 0.90 m.) has five to seven courses of oblong stones irregularly laid; wall 2 (greatest height 1 m.) has seven courses. The construction of the two walls is the same, very inferior work. The builders began to lay the courses at different levels, but certainly not more than two courses of the walls as they stand to-day were meant to be seen. The stones are laid either along or across the walls, seldom extending through; typical dimensions are 0.41 m. \times 0.20 m. \times 0.20 m. Much earth is used for filling.

Within the inner circle and about 0.60 m. below the present top of wall 1, we came upon straight walls of a very different style ('Oldest' on the plan). These walls are 0.60 m. wide. Four courses remain; of these the two lower seem to belong to foundations, the upper two were meant to be visible. There appears to be an attempt at "header and stretcher" construction in alternate courses. The blocks are rudely rectangular and there is little earth between them. We dug the pit inside the inner circle to a depth of 2.70 m., *i.e.* more than a metre below both sets of walls. The only finds were animals' bones, fragments of pottery, charcoal, and, at a depth of 1.60 m. (on a level with the bottom of the straight walls), in a place that showed distinct signs of burning, five large round-headed iron nails, all bent at a right angle. Close to this spot but just on the outside of wall 1, two more nails, precisely similar, were found. The inference is that the nails were there before wall 1 was built, and are contemporaneous with the straight walls which I believe to be much older than the circular walls. These straight walls are continued in the space between walls 1 and 2 and wherever else the shading as in 4 is used in the plan. Whether *BC* is also continued outside of wall 1, I cannot say, since it did not seem best to destroy the platform that makes

the entrance to the later circular building, whose doorway, I may add, faces due east.

To the earliest period belongs also a round, hard, gray stone, *D* on the plan, in diameter 0.50 m., in thickness 0.20 m., which seems to be *in situ*; also the polygonal wall, 4, of which only one badly damaged course remains.

A third period, between the earliest and the latest, is represented by a third circular wall 3 (diameter about 10.30 m., width 0.92 m.). Between points *a* and *b*, six and seven courses remain on the north side of the wall, and the height in one place is 1.38 m. But in a large portion of the circle, only the foundation course is left; this is often reduced to single stones, and in the northwest quadrant is interrupted several times. The foundation course is built in polygonal style, of large rocks rudely fitted to each other; typical dimensions for the face of one of these rocks are 0.65 m. \times 0.40 m. On this foundation oblong blocks or slabs are laid (typical dimensions, 0.30 m. long, 0.20 m. thick). While there are seven on the outer side of this circle at *ab*, on the inner side there are only three, for here wall 3 rests upon straight wall 5, which is a part of the earliest building.

Since wall 6 rests upon straight wall 7 and is itself partly covered by circular wall 2, I have classed it with the large circle, of which it is almost a diameter, in the intermediate period, and to the same epoch I have assigned the walls lying to the north of the large circle. Finally, the cistern may belong to either the first or the second period. Its diameter is 3 m.; the surrounding wall is 0.50 m. thick and is lined with a firm white stucco, 0.04 m. to 0.05 m. thick; its height varies from 0.85 m. to 1.60 m., since the upper part is broken away. The floor of the cistern is made of the same white stucco as the sides. A bronze hairpin was the only thing found in the cistern.

At first sight, the position, shape, and construction of the circular building suggest a windmill, and M. Hazzidakis tells me that in old times the windmills of Syros all had double

walls—the space between the two serving as a storeroom—and that one such mill still exists at Melos.¹

But of the antiquity of the building whose walls are shaded as in 4, 5, 7, *D* on the plan I think there can be no doubt. Designs of the early Geometric period with many Mycenaean survivals are frequent on the pottery turned up on the site, and near one of these walls, the body of a “sitting bull” was unearthed, which defied all our guessing until the animals were found on Rusty Ridge (see PLATE V *d*), when it was immediately recognized. In fact, the only objects that suggest “late” connections are pieces of a pithos with a pattern that may be Hellenistic, and three broken lamps. We did not come upon a single coin or potsherd of Byzantine, Venetian, or Turkish times.²

A late stage of Geometric art is represented by a few vases (three whole and five broken) which were dug up at a place called “Great Boulders” (*Χονδροβολάκες*), halfway between Thunder Hill and Azoria Hill, in shaft graves. There were four of these graves, close together; their length averages 2.60 m., width 0.70 m., the thickness of the walls is 0.50 m. and their present height not more than 0.35 m. Only the lower part of the graves remains. The earth which filled them is black and as fine as powder, the result of burning; no bones were

¹ Circular towers have been noticed on other of the Cyclades:

Thera, Ross, *Inselreisen*, I, 43.

Weil, *Ath. Mitt.*, I, 335, and II, 62.

Naxos, Ross, *Inselreisen*, I, 43.

Myconos, Ross, *Inselreisen*, II, 31.

Siphnos, Ross, *Inselreisen*, I, 146.

But these towers are built of squared blocks of marble, and belong to Hellenic times. The closest resemblance to our structure in place is with a circular building on Amorgos. See Tsountas and Manatt, *The Mycenaean Age*, p. 261, Fig. 136.

² Aside from the bronze hairpin, the lamps, and the body of a bull mentioned above, the other single finds from Azoria Hill were:

- a. Three bronze nails with round heads, diameter of head about 0.015 m.
- b. Bronze skewer (?), 0.12 m. long.
- c. Bronze hook with three knobs and a cleft end, 0.035 m. long.
- d. Iron arrow-head, 0.02 m. long, one barb broken.
- e. Soapstone whorl, diameter, 0.025 m.
- f. Gray stone, ribbed for rubbing corn.

found. A small lekythos of the well-known Proto-Corinthian type with Geometric decoration marks the advance in time from the beehive tombs to the shaft graves.

Finally, in order to complete this report, mention must be made of later remains in the region west of Kavousi plain.

At Cape Tholos, close to the shore, stands the church of the Holy Virgin (Παναγία), whose fête (πανήγυρις) was celebrated during our stay in Kavousi, on Ascension Day. About 3 m. from its northeast corner lies a grave 2.20 m. long, 1.06 m. wide, 1.10 m. deep, made of the local stone fitted with small stones and earth, and lined with plaster. The grave may be either Roman or Byzantine. It had been opened, probably more than once, and aside from pieces of the slab which once covered it (0.05 m. thick) and a few bones including parts of a skull, it contained only earth. In the neighborhood are fragments of tiles and coarse red ware, but nothing that can be dated with probability before Roman times. The hills close at hand are rocky, with no depth of soil, and bear no traces of ancient occupation, but on the point to the north of the church there are the walls of several old buildings.

About 100 m. south of this church stands the building which gives its name to the cape. It measures on the outside 57 m. long north and south by 9.30 m. wide east and west. The average thickness of the walls is 1.10 m., and their greatest height to-day 3.70 m. On the east side there must have been ten buttresses; of these, five, beginning from the northeast corner, are in fairly good condition (average distance apart, 3.80 m.; average thickness, 1.50 m.), four are badly damaged, and the tenth has disappeared, together with the adjoining wall. On the inside there are remains of three cross-walls (average distance apart, 12.60 m.; average thickness, 1.10 m.). The structure is certainly Roman, but in some parts of the outside walls stones are used which probably were taken from an earlier building, and which give to these parts the appearance of Greek work. There is an inner wall of tiles about 0.03 m.

thick, neatly laid. The floor is made of a cement of pebbles about 0.10 m. thick, resting on the live rock. We made openings at several points, in order to learn whether there was any space below the floor, but found none. Probably the peasants are not far wrong when they call this an ancient storehouse (*ἀποθήκη*); it may have been one of the granaries from which Rome drew her food supply. Roman gems have been found in the neighboring fields.

Following the line of hills to the southwest, we have already noticed traces of an earlier civilization at the place called St. Antony's (*Ἅγιος Ἀντώνιος*). Near the bottom of this hill, in a cubic foot of space were found three whole lamps, pieces of eight other lamps, fragments of terra-cotta "icons" and of jugs — all of Roman or late Greek make. The lamps are bowls closed by a "concave perforated cover, with stamped ornament" (*Cyprus Museum Catalogue*, "Lamps Hellenistic and Graeco-Roman," p. 80); they have a "ring-handle opposite the nozzle" and in two instances a "scroll ornament on each side of the nozzle." One shows Zeus Ammon, full-face, with the eagle wings spread, standing before him (cf. *Cyprus Museum Catalogue*, nos. 1385-6, and the illustration in Pashley's *Travels in Crete*, II, p. 21); another, a goddess wearing a turreted crown and bearing a cornucopia; a third, a cock within a wreath of leaves. On one fragment is a bull; on another a sphinx; on a third, a graceful figure, either warrior or Amazon, attended by a dog. The "icons" measure about 0.10 m. square, have a moulded frame with a ring by which they may be hung, and usually represent a horseman.

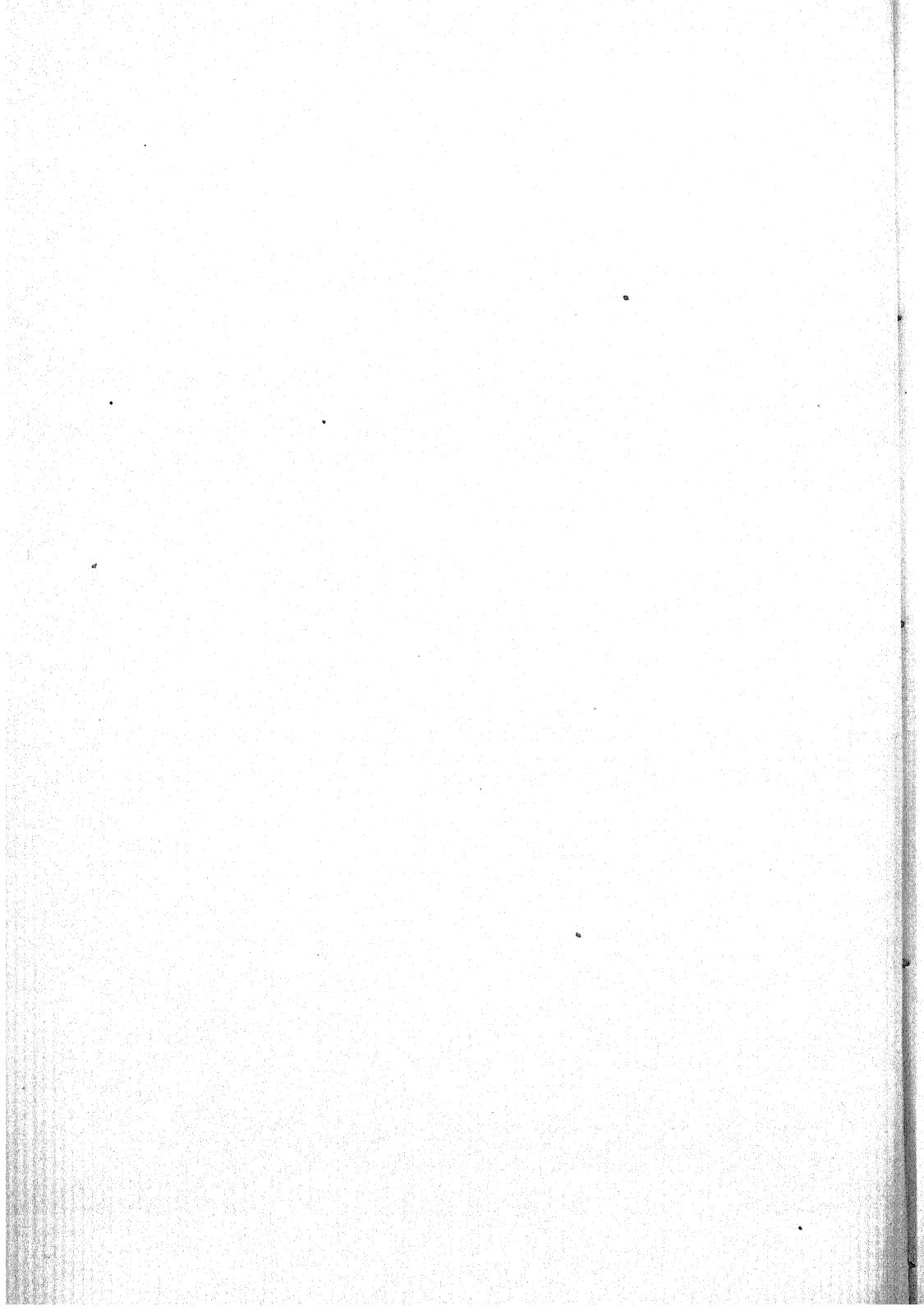
Still further to the southwest, on the hill called "Little Villages" (*Χωριοδάκια*), we dug out a lime-kiln, a cistern, and a hydrant of uncertain date, probably Roman. The top of the hill has good ancient walls, noted by Mr. Evans, but these we did not touch. A short distance to the south, at "Harbor Head" (*Κεφαλόλιμνος*), we uncovered some poor house-foundations and found potsherds among them. A circular pit lying beneath these foundations contained some pieces of primitive pottery.

Close at hand are two graves cut in the rock. The first, 2.15 m. long, 0.75 m. deep, is broken away on both sides, and contained nothing. The second, 1.90 m. long, 0.75 m. wide, and 1 m. deep, had also been robbed, but the robber had left the four skulls and the bones undisturbed. Pieces of at least five vases remained. In the bottom of one jug lay a plain iron hoop ring, an iron ring with bezel from which the stone had been taken, and a coin of the Emperor Gallienus.

It appears that the Romans preferred the coast and the low hills to the west of Kavousi for their settlements. Perhaps this land had already been occupied by a primitive people; but this remains a point to be settled by future excavations. It is certain that on the steep heights above the present village, people made their homes almost three thousand years ago, living a life as simple, no doubt, as that of the Sphakiots to-day, but with an instinct for decorating their possessions that gives them a place, however humble, in the history of art.

HARRIET A. BOYD.

SMITH COLLEGE, NORTHAMPTON, MASSACHUSETTS,
March 6, 1901.



FRAGMENT OF AN ARCHAIC ARGIVE INSCRIPTION

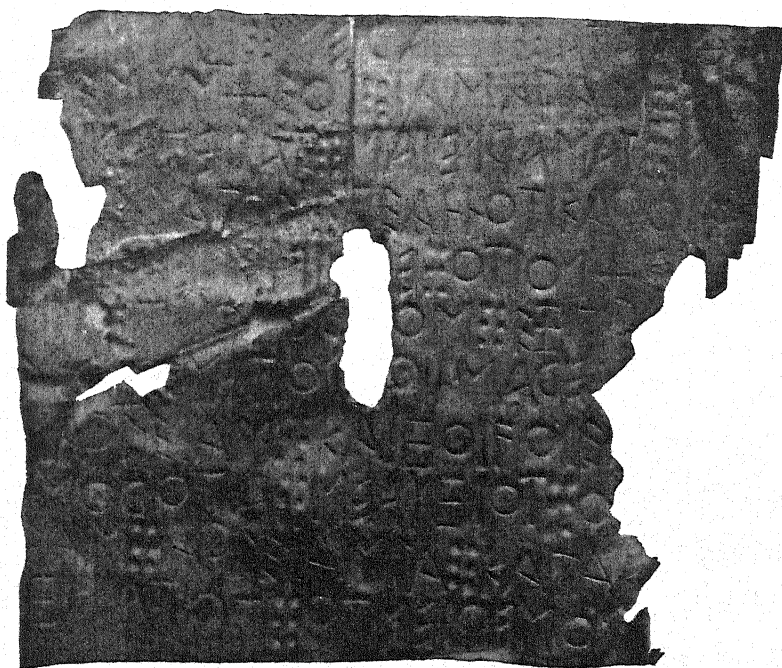



FIGURE 1. — ARCHAIC ARGIVE INSCRIPTION ON BRONZE. FROM A PHOTOGRAPH.

THE bronze fragment which is here reproduced from a photograph and squeeze was found at the Argive Heraeum in April, 1895. It measures on the upper edge 0.155 m., on the lower edge 0.135 m., and in height 0.135 m. The plate,¹ which had doubtless the oblong shape of such bronzes , seems intact at the top and bottom, but is badly mutilated at the centre and has lost both ends. This inscription, which is

¹ Now in the National Museum at Athens.

shown beyond a doubt to be Argive by the provenience, the contents, and the form \mathfrak{t} , presents the best example of early writing in this dialect. The letters are impressed with care, and show little variety in form; *beta*, *phi*, and *psi* are lacking, but *zeta*¹ and *xi* appear for the first time in an Argive inscription before the fifth century B.C. The writing is boustrophedon.

The Text.—LINE 1.—The mark at the left \mathfrak{l} may belong to any one of several letters, as \mathfrak{M} , \mathfrak{M} , \mathfrak{A} , \mathfrak{M} , etc., but will in this paper for convenience be transcribed as *iota*.

LINE 3.—At the left the plate is broken obliquely directly after \mathfrak{M} , but the stroke \mathfrak{A} was clearly discernible. This stroke must have belonged to \mathfrak{A} .

LINE 4.—The letter after \mathfrak{K} was certainly \mathfrak{A} , as the stroke \mathfrak{l} shows. The next letter, to judge by the shape of the broken plate, seems to have been a rounded one, as \oplus , but \mathfrak{l} could have been written, viz. *κα θάνατον* or *καὶ ἄνατον*.

LINE 5.—At the right the reading is certainly $\epsilon\pi\iota[\tau]\epsilon\chi\nu\omega\iota\tau\omicron$. At the extreme left the letter before \mathfrak{O} seems to have been \mathfrak{q} or \mathfrak{T} . \mathfrak{A} , \mathfrak{q} and \mathfrak{A} are hardly possible, as the vertical stroke of these letters should have been nearer the mark of punctuation. \oplus or \odot would hardly have been placed so high. If probability is to be the guide, \mathfrak{q} or \mathfrak{T} may be restored.

LINE 6.—After *ππο gamma* is almost certain, for the plate will allow of no other consonant except \mathfrak{t} .

LINE 7.—At the right edge the bronze was almost entirely eaten away, and only a faint outline of the letters $\mathfrak{A}\mathfrak{D}\mathfrak{l}$ was preserved by the dirt which had formed a crust at this point. I am positive, however, as to the letters, and my reading was confirmed by M. Homolle, who very kindly examined the plate soon after it was found.

LINE 8.—The strokes at the right, \mathfrak{M}'' , were very uncertain. After *φοι ε* the stroke \mathfrak{l} is certain, and the shape of the break indicated that \mathfrak{t} had been written, but the letter may have been \mathfrak{M} or a similar form.

¹ The archaic inscription from Hermione (?), *Rev. Arch.* 1891, p. 50, may contain an exception.

LINE 9. — At the right I was just discernible on the bronze. The letter could hardly have been Ϟ, as the stroke is too near O. T was probably written.

LINE 10. — At the right the slanting stroke / must belong to A.

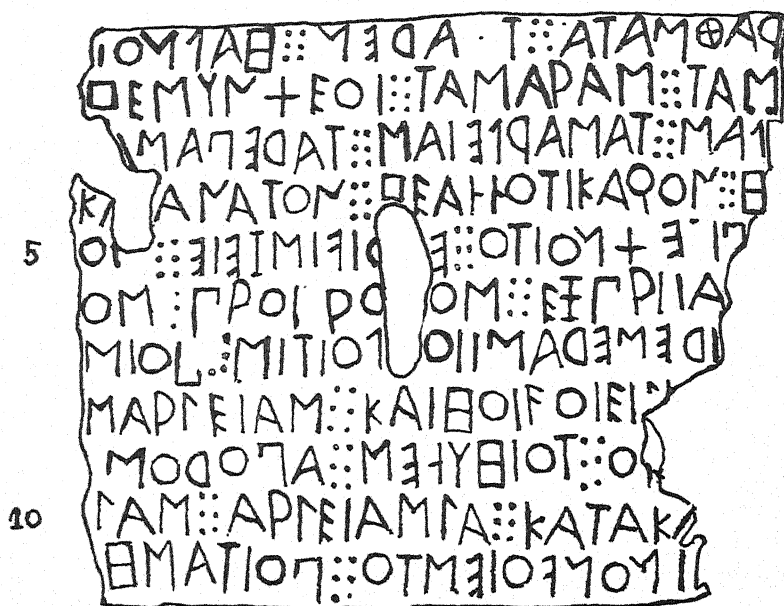


FIGURE 2. — ARCHAIC ARGIVE INSCRIPTION ON BRONZE: FACSIMILE.

- 1 ραθματα :: τ αδεν :: χαγνοι
 η̃η συγχέοι :: τὰς ἀρὰς :: τὰς
 γὰς :: τὰς Ἀργείας :: τὰ δὲ πὰμΑ [viz. πάματα
 κΑ[θ]ἀνατον :: η̃η ἄλλο τι καϑὸν :: η̃
 5 ἐ]πι Τεχνῶιτο :: ε̃)ιφισζει :: Ϟο[θαρὸς or Το[ῦτον
 ος :: πρό[γ]ρο[φ]ος :: ἐξπριῶ[σθω
 α]ῖ δὲ μὴ δαμιο[ρ]γοί τις :: ἡοῖς or ἡοῖ μ
 τὰ]ς Ἀργείας :: καὶ ἡοῖ φοι ἐτ
 Το :: τοῖ Ηυ(λ)λῆς :: ἀποδόμ[ενοι
 10 γὰς :: Ἀργείας γα :: κατακα
 ἀνα]ῖνόν φοι ἔστω :: ποῖ τὰς Η[ήρας.

LINE 11. — Γ at the right belongs almost certainly, as the shape of the broken plate shows, to Γ .

The Date. — The inscription belongs perhaps to the seventh century B.C. The alphabet is that of the oldest known Argive inscriptions. The sibilant has the oldest form, \mathcal{M} , being distinguished from mu only by the length of the fourth stroke; χ and θ have the vertical and not the oblique strokes ($+$ \oplus), while ρ and δ have the rounded (P D) instead of the angular forms. The tablet was found, together with vase fragments of the Mycenaean, Dipylon, and Proto-Corinthian styles, four feet below the surface of the ground, close to the high terrace-wall at the west of the Second Temple. On the back face of this wall is an inscription¹ with the three-bar *sigma*, but it is quite probable that the block containing this inscription had been used formerly for some other purpose. The Berlin inscription, *Arch. Ztg.* 1882, p. 385, has a more archaic appearance, but is perhaps not older, as a law written on bronze would probably exhibit more regular forms than a votive inscription on stone. Our inscription is much older than the Argive inscription, *Am. J. Arch.* XI (1896), p. 42, which has ξ , $\Lambda = \gamma$, P , $M = \mu$, is written from left to right, and belongs to the early part of the fifth century, or earlier according to Professor Richardson. The Hermione inscription, *Rev. Arch.* 1891, p. 50, and *Mon. Antichi*, 1891, pp. 593 ff., is considerably later than the fragment before us, but perhaps somewhat earlier than the one just mentioned.

The Subject. — The lines are far from complete, and some of the words preserved are enigmatical; hence it is hazardous to attempt to reproduce even the general sense of the missing portions, but this much may reasonably be inferred: "If any one [line 2 sqq.] commits a certain crime, he is to be subject to the curse; he is to be exiled from Argive territory, and his property is to be confiscated. Whoever contrives death or any other evil against (the exile or the people of Argos) is to meet with a certain kind of treatment. Certain officials are to man-

¹ *Am. J. Arch.* XI (1896), p. 57.

age the sale of the property in a specified manner. In case this duty is not performed, the tribe Hylleis is to conduct the sale. If any Argive recalls the exile, it shall be an unholy act in the sight of Hera."

The inscription, then, is a decree emanating from some high official source, and as the reading in some parts is so certain, in other parts so probable, I have felt justified in attempting to reproduce the thought of the original. In a proclamation of this kind it might be expected that the opening line would contain the familiar expression that "This is the resolution of such and such a council." The wording of these introductory formulas varied more than the meaning, as *e.g.* Aeolic *ἔγνω δᾶμος*, Attic *ἔδοξεν τῇ βουλῇ*, Sicilian *βουλᾶς ἀλίασμα*, Elean *ἃ φράτρα* + (dative), and Halicarnassian *τάδε ὁ σύλλο[γο]ς ἐβουλεύσατ[ο] . . . ἐν τῇ ἱερῇ ἀγορῇ*. In *ραθματα* :: *τ αδεν* :: *ἡαγνοι* there are many points of resemblance to the words of these introductory formulas. *ᾠλία-σμα* and *ρα-θμα-τα* have a similar formation and suffix, while *φρά-τρα* and *ρα-θματα* may have the same root. The wording of the Halicarnassian inscription suggests the explanation that *τ αδεν* :: *ἡαγνοι* may be part of the expression *τάδ' ἐν ᾠγνῷ ἱαρῷ τᾶς Ἥρας*. On the other hand *αδεν* may represent Athenian *ἔδοξεν*. Resolutions were called *τὰ φεσαδηκότα* (Locris), and a decree *ἄδος* (Halicarnassus). Pindar, *Ol.* 3, 1, has the second aorist infinitive *ἀδεῖν*, and in *Ol.* 7, 17 and *Py.* 2, 96 *ἄδοντα*. These seem to be cases of Aeolic psilosis, but the smooth breathing was common enough, as in the following words from Hesychius: *ἄδῶ · ἀρέσκω : ἀέδοντα · ἀρέσκοντα : ἄδημα, ἄδισμα, ἄδμα · ψήφισμα, δόγμα. ἀδέω* of Hipponax is thus defined by Eustathius (1721, 61): *ἄδῃκε βουλή, ἡγουν ἡρεσκε τὸ βούλευμα*. Hesychius has also *ἔαδεν · ἔδοξεν*, and Homer has *εὔαδεν*, but here the digamma is apparent. In view of the numerous forms with the smooth breathing, and of such Argive forms as *Ἥρας, ἱαρομνήμενες*,¹ the form *αδεν* might be taken as the third singular indicative of a secondary tense from root *αδ*, with neuter plural subject,

¹ *Am. J. Arch.* XI (1896), p. 43.

-ραθματα, and followed by the dative *ἡγνοι*, which is an epithet either of the body adopting the resolution or of the place of adoption, as in the phrase *σεμνῷ ἐνὶ ζαπέδῳ*, *I.G.A.* 401. But *αδεν* in this inscription can hardly be connected with the root of *ἀνδάνω*, as a dialect which has *ϕ* and aspirates *ῆ* would doubtless show either *ϕ* or aspirate. However, since *ραθματα τ ἀδεν ἡγνοι* correspond so closely in words, order, and syntax to common introductory formulas of similar decrees, I am strongly inclined to regard them as part of the opening formula and shall interpret accordingly.

The Interpretation.—**LINE 1.**—*ραθματα* is doubtless for some word which ordinarily ends in *-σμα*. Kühner-Blass, *Gr. Gr.* § 329, 30, in regard to this suffix says: "Wenn diese Suffixe (*-μος*, *-μα*, etc.) an vokalisch auslautende Wurzeln treten, so tritt bei späteren Wörtern oft ein *σ* zwischen Stamm und Suffix, bei alten aber ein *θ*, also *θ-μος*, *θ-μα*, *θ-μη*, . . . *σπᾶ-σ-μα*, *ἰ-θ-μα*," etc.¹ If the reading were *ϑ* and not *ϑ*, the word might be *δα-θ-ματα* = *δά-σ-ματα* (Hesychius). Blass (*Jb. Phil. Paed.* 1891, p. 559) thinks this word occurs in the archaic inscription from Hermione (or rather from Argos), but the meaning is strained, and as here there is no reason for changing the reading from *ρ* to *δ*. The bronze certainly has *ρ*. The vertical stroke *l*, to be sure, is at the extreme edge, but the impressed line was clearly visible, and accordingly *ρα-θ-ματα* = *ρα-σ-ματα* must be considered.² Since this form seems to be connected either directly or indirectly with *συγχέω* of line 2, its interpretation, so far as meaning is concerned, is comparatively simple. The application of *συγχέω* to a crime is so limited that it is possible to get pretty close to the thought of the original. An action against objects, not persons, is indicated, and such a crime as murder or assault cannot have been contemplated. *συγχέω* in such connection commonly relates to the defacement of objects, the erasure of letters (much as the verb in

¹ Cf. also Brugmann, *Gr. Gr.* (1900), p. 75.

² The ending *-αθμα* occurs also in the Argive inscription, *Am. J. Arch.* IX (1894), p. 358, but there is no clew to the full word.

the Elean αὶ δέ τιρ τὰ γράφεα κα(δ)δαλέοιτο), and, as at Halicarnassus, to the annulment of a law or covenant. *ῥάσμα* (Athen.), *ἀνά-βρασμα*, *ἀπό-βρασμα*, and *κεράσματα* must, therefore, be rejected on account of meaning. *ἀγοράσματα* and *δράσματα* (Hesychius), are, however, possible. The former (cf. *ἀγοράται·λέγει*, as in Homer) might be the official utterances of the marketplace, being a form in meaning and formation kindred to Doric *ἄλιασμα* = *δόγμα*, from *ἄλία* = *ἐκκλησία*. *δράσματα·συνθήματα* is most appropriate here, as I believe the bronze contains a covenant between certain cities rather than the law of one state; but as the orthography is somewhat uncertain, this word can hardly be accepted. The common term for covenant is *ῥήτρα*; but in spite of the fact that the stem appears as *α* in Elean *φράτρα*, Cretan *Ζεὺς Ὀράτριος* (Cauer², 117, lines 13, 19), Sicilian *Ῥάτωρ* (*C.I.G.* 5739), and in the psephisma from Byzantium (Dem. 255, 21), it is unlikely that *ραθματα* is a formation from this stem. *ἄρθμος·συνθήκη* (Hesychius, epic and tragic poetry) by metathesis *ῥάθμος* or *ῥάθμα*, would give a form quite appropriate here. The term *ᾄθμα* = *ᾄμμα* suggested to me *γράφμα* = (*γράφμα*) *γράμμα*. As a matter of fact *γράφμα* occurs in connection with *ᾄθμα* (*Anec. Oron.* I, 102, 30), and curiously enough *γραφασμάτων* is found in the archaic inscription from Hermione mentioned above. This form was regarded by Froehner (*Rev. Arch.* 1891, pp. 50 ff.) as from *γράφω*, by Blass as standing for *δασσμάτων*. In my opinion the form is certainly for *γραμμαμάτων*, and I notice that Robert (*Mon. Antichi*, I, pp. 594–600) holds the same view¹ and cites *Ἀγαμέσμων* = *Ἀγαμέμνων*, *Μέσμων* = *Μέμνων*. G. Meyer (*Gram.*³ 366) with much probability refers these forms to *Ἀγαμέδμων* and *μέδομαι*. In Elean ζ and δ have about the same phonetic value (G. Meyer³, 370), and in other dialects there is constant confusion between ζ, δ, σ, θ.² Compare Argive *σευτέρας* for *ζευτέρας* = *δευτέρας*, Laconian *σιὸς* = *θεός*, *σάλλει* = *θάλλει*, *ἔσηκε* = *ἔθηκε*, *παρσένος* =

¹ Cf. Danielsson, *Eranos*, I, 30 sqq.

² Cf. Blass, *Aussprache d. Griech.* (English trans.), p. 108.

παρθένος, μυσιῶδω = μυθίζω (Kühner-Blass, I, 151), Gortyna πράδδεσθαι (for πράζεσθαι) = πράσσεσθαι, Cretan ὄζοι = ὅττοι, ὅσοι, Attic ἄσμετος = ἄδμητος, Κάσσμος = Κάδμος, Κασμία = Καδμία, Arcadian Ὀπλοδμία and Ὀπλόσμιος. γράσμα is, then, the intermediate step between γράμμα and γράμμα.¹ γράμμα in Thuc. V, 29, means the article of a compact; hence γ]ράθματα here may have the same force or may be the compact itself, the ῥήτρα, — a term most suitable here and also the very term which may be repeated most acceptably with συγχείοι of the succeeding line. If, on the other hand, ραθματα is to be construed directly with συγχείοι and in another sense than συνθήκη, it would appear to have some such force as ἔδρασμα · ἄγαλμα (Suidas), or ἱαράσματα (by analogy with ἀγοράσματα) from ἱαρός, viz. "If any one should steal or deface (συγχείοι) the sacred offerings." Other words might be suggested, but further speculation is useless. It is reasonably certain that the first sentence of a public ordinance contained an equivalent to δόγμα or συνθήκη, and this term, I believe, is found in ραθματα.

τ αδεν. The space between τ and α was perhaps reserved for the fastening. In the archaic bronze from Hermione one hole corresponds in position to the blank space in τ αδεν, and in fact a small indentation is visible here after τ, as if an attempt had been made to puncture the plate. The bronzes from Elis exhibit great variety in the position of the holes. In some instances the nail holes are between the letters of a word, in one, I.G.A. 113 b, the nail apparently has been driven through a letter, — good evidence that the holes were made after the letters were cut.² Our bronze is so thin that the letters are as legible on the back as on the front, so that a sharp nail could easily be driven through the plate, and it seems therefore quite probable that the space was left for the nail

¹ So the probable series δθμα — *δσμα, δμμα: *πάθμα — *πάσμα (cf. Cretan πασ-τάς beside πεπαμένω), πάμμα (πολυπάμμονος), πᾶμα: στέθματα — *στέματα — στέμματα.

² Roehl thinks the bronze was nailed up before the letters were cut, but this is very improbable.

hole, but for some reason not utilized.¹ *αδεν* has been discussed above. If it is a separate word, *τ* is hard to explain. It might stand for *τ'* = *τά* and have the force of the demonstrative, as in Epic. But *τ'* = *τάδε* and *ἄδεν* from $\sqrt{αδ} = \sqrt{φαδ}$ or $\sqrt{σφαδ}$ present so many difficulties that I prefer to take the form as *τάδ' ἐν* and the following word as a dative. The preposition should not, of course, be separated from its case by a mark of punctuation, and I am reluctant to hold that a mistake has occurred here,² although such an occurrence is not without parallels. In the Cypriote inscription, Coll. 60, 12 : 24, 25, the punctuation occurs even in a compound word, *ἐξ[ορύξη]*. Compare also *ἐγ δὲ : τῆς ἀριστ[ερῆς] : ἐς τὴν δεξιήν* : *I.G.A.* 499, 5 ; *ἐν τῷ : πολέμῳ* : *C.I.A.* I, 433, 2 ; *ἐπὶ : νίκη* *C.I.G.* 34. In the inscription from Naupactus, *I.G.A.* 321 A, even syllables are separated, as *καταλείπον : τα*. Still more curious is the double punctuation for the nail hole in the bronze (*Jb. Phil. Päd.* 1891, p. 559), : *τᾶς* : *Ο* : *Ἀθαναίας* : . Here also the article is separated from the noun, *τὰ]ν : βωλάν* :³ ; also *ἐ τᾶς : ἀλιάσσιος* : . Even a double consonant is broken, as *Χ : Συνάρχοντες* (Osann, *Sylloge*, p. 55). Elision of *ε* in *τάδε* is common, so that there is no insurmountable objection to considering *τ αδεν* as *τάδ' ἐν*. *ἡγνῶι* is, then, an epithet of the sanctuary. Normally the article would be employed, but the omission hardly needs comment (cf. *ἐν ἱερῷ*, Cauer², 118, 6). Lines 223 ff. of the *Supplixes* of Aeschylus perhaps deserve to be quoted here :

*ἐν ἡγνῶ δ' ἐσμός ὡς πελειάδων
ἵζεσθε κίρκων τῶν ὁμοπτέρων φόβῳ.*

LINE 2. — *ἡ συγχείοι, τᾶς ἀρᾶς τᾶς* [

The thought here and in line 3 is quite clear. *συγχείοι* is the last verb of a protasis stating a crime, and the punishment follows. *τᾶς* is doubtless genitive, as the accusative in Argive

¹ Cf. the blank space in *I.G.A.* 113 b, line 6.

² "Da müssen wir uns, meine ich, erinnern dass die alten Bronzen, so die lokrischen und die eleischen, auch sonst recht fehlerhaft sind." Blass, *Jb. Phil. Päd.* 1891, p. 559.

³ Not so in *Mon. Ant.* I, p. 594.

shows the nasal form *τάνς*. The use of the article indicates some well-known curse which seems not to have been written on the bronze. The phraseology here corresponds most closely to the following formulas: *αἱ δέ τιρ τὰ γράφεια ταῖ κα(δ)δαλέοιτο . . . , ἐν τῇπιάρου κ' ἐνέχοιτο τῶι νταύτ' ἐγρα(μ)μένοι, I.G.A. 110 (Elis); τῶν νόμον τοῦτον ἦν τις θέλῃ [συγ]χέαι ἢ προθήτα[ι] ψῆφον . . . , τὰ ἐύν[τα] αὐτοῦ πεπρήσθω καὶ τῶπόλλων[ος] εἶναι ἱερὰ καὶ αὐτὸν φεύγειν ἀ[ιεί]* (Halicarn.). For protasis compare *ὅς ἂν τὰ(ς) στήλας, ἐν ᾗσιν ἡπαρὴ γέγραπται, ἢ κατὰξει ἢ φοινικήϊα ἐκκόψε[ι] ἢ ἀφανέας ποιήσει. I.G.A. 497*. The sentence may be thus restored: *αἱ δέ τις ταῦτα (viz. τὰ γράφεια or γράθματα or τάνς στάλας) λύσαι] ἢ συγχείοι, τὰς ἀρὰς τὰς [κειμένας — or ἐν τὰν στάλαν γεγρα(μ)μένας — ἐνοχος ἔστω, καὶ αὐτὸς τρέτω or φευγέτω ἐκ] γὰς τὰς Ἀργείας· τὰ δὲ πᾶμ[ατα] αὐτῷ πεπράσθω καὶ τὰς θεῶ ἔστω ἱερά.* The word for 'property' is doubtless *πάματα*, which occurs in a later Argive inscription published by Professor J. R. Wheeler, *Am. J. Arch.* IX (1894), p. 358, who cites various forms of the word.

LINE 4.—The reading may be *καὶ ἄνατον*, but is doubtless *κα θάνατον*. The thought here is comparatively clear, but the person plotted against is uncertain. *κα* is puzzling. In Cyprian *κα* = *καί*, and also stands for *κατά*. It does not seem here to stand for *καί*, and apparently is not for *κατά*, viz. *κά(θ)θάνατον* (cf. *κάτθανε, καθθέμεν*) as in *τοῖστραταγοῖς*, etc. *κα* must, I think, be taken with the optative *ἐπι[τ]εχνῶιτο* of the following line. The solecistic use of the optative with *κα* might perhaps be explained by the distance between the two words. But the optative with *κα* in protasis is said to occur in the inscription from Ozolian Locris (*I.G.A.* 322, 4): *αἱ κἀδίκω(ς) συλῶ*, but *κἀδίκως* may here stand for *καὶ ἀδίκως*, and has been so explained. The use of *κε* with the optative in protasis is found in Homer, but is a rarity in the inscriptions. In the Hermione inscription already mentioned, we have, after an optative in protasis, the elliptical expression *αἱ δέ κα μή*; but it is quite likely, I think, that our *κα* is part of *ποκά* = *ποτέ*: "If any one should at any time contrive," etc. Line 4 possibly

continues the penalty of the preceding: αἰ δέ τις πο]κ[α θ]άνατον ἢ ἄλλο τι καὶ ὅν ἡ[οτιῶν τῶι ταῦτα πεποιηκότι ἐ]πι[τ]εχνῶιτο, ε . . . ιφισζειε, [Ϝ]ο[θαρός ἔστω καὶ ἀζάμιος.¹ On the other hand the sentence may contain the main thought of the law, which associates in Draconian fashion a murderer and any other transgressor, and pronounces the same penalty on each. An inscription from Teos, *I.G.A.* 497, line 25, contains a similar association. "The poisoner, the one who obstructs the importation of grain or disobeys an official, the traitor, the highway robber, the pirate, and whoever [τι κ]ακὸν βουλευοὶ περὶ τ[η]ῶν τοῦ ξυνοῦ εἰδὼς π[ρὸς] "Ἕλληνας ἢ πρὸς βαρβάρους, ἀπόλλυσθαι καὶ αὐτὸν καὶ γένος τὸ κείνου." This sentence, then, may contain the law of an Argive Draco: αἰ δέ τις πο]κ[α θ]άνατον ἢ ἄλλο τι καὶ ὅν ἡ[ἀτινι μηχανῇ ἢ τέχνῃ τοῖς Ἀργείοις ἐ]πι[τ]εχνῶιτο κτλ.

LINE 5. — :: ε ιφισζειε :: is at first sight obscure. One may evolve here ἢ φοι φῖς (Γῖς · ἰσχύς Hesychius) ζείε (*ζήμι), forms which recall the Homeric line οὐδὲ φοι ἦν φῖς οὐδὲ βίη (*Od.* 18, 3), but the punctuation indicates one word or some closely related words. The last three letters, ειε, suggest an optative, which seems, however, to be neither the conclusion of the preceding protasis nor a continuation of ἐπιτεχνῶιτο. In the latter case the first ε should be aspirated, viz. *hḯ* as above; in the former case *κά* should appear. The lack of the aspirate is of course not a fatal objection, as its use in Argive (as seen above) is not always in accord with expectations; but there should be consistency in the same inscription, and *hḯ* should appear. A wish is hardly possible here, and I suspect therefore an expression supplementary to the preceding, as "If any one should contrive death or any other evil — as he may have strength — wherever he may be living — in whatever way he may know of," or a parenthetical statement, such as "If any one should contrive death — in sooth should he know of it," viz. if he be an accomplice. In such statements concerning crimes the word εἰδῶς is found, and *εἰζῶς* of Elis affords a

² For the conclusion cf. *Coll.* 213, 19: ἀ δέ πόλις ἀνατρίος καὶ ἀζάμιος ἔστω.

clew to the solution of this abnormal form. ἴσαμι·ἐπίσταμαι Συρακούσιοι (Hesychius) like γοῖδημι is probably a late formation, but the plural forms ἴδμεν, ἴστε, and ἴσασι, Homeric *φιδυῖα*, (cf. G. Meyer³, 631), the middle ἴδμαι and *φίσαμεν(αι)·εἰδέναι* (Hesych.) justify the association of *φισζειε* with *εἰδείη*. Concerning σζ for ζ, G. Meyer³, 303, says: "Ein etwas älterer Ausdruck für den stimmhaften Zischlaut ist σζ, sowohl für ζ wie in alt arg. *δικάσζοιτο, ἐπεψη]*φισζεν C.I.A. II, 325 a, 5, *θυσιάσζειν C.I.A. III, 73, Θεόσζοτος Coll. 1043*, als auch für weiches σ wie *ἐνδέσζμους, ἀναβασζμούς, Ἐρασζμία, χρῆσζμόν.*"¹ Accordingly *φισζειε* is an Argive form of *εἰδείη*, but there is some difficulty in determining its exact relation to the sentence. The forms before *φισζειε* may represent the familiar *ἦτιν μηχανῇ*, viz. *ἐν ᾧ* or *ἐφ' ᾧ* *εἰδείη* (= *ἐν ᾧ τρόπῳ εἰδείη*), or more likely *ἦτοι εἰδείη*, "In truth should he know of the evil deed," a statement parenthetical to the preceding. What follows was in meaning either *ῥοθαρὸς ἔστω καὶ ἀζάμιος* or *τοῦτον θανατῶν καὶ τὸ γένος*.

LINE 6. — This prescribes the manner in which the property of the exile is to be sold. The reading after -ος was doubtless *πρό[γ]ρο[φ]ος ἐξπριά[σθω]*. The spelling *γροφος* for *γραφος* needs no comment. The writing of O over A in the Argive inscription I.G.A. 38, *γ]ροφο-* may, however, be noted. The punctuation before *πρό[γ]ρο[φ]ος* shows that the preceding -ος is not part of the article *τούς*, which form, moreover, would be *τούς*. *πρό[γ]ρο[φ]ος* is, then, nominative, and explanatory probably of the preceding word, which is the title of the official who is to manage the property. From the verb *δαμιο[ρ]γοῖ*, line 7, it may be inferred that the title was *δαμιοργός*, a word which occurs in a later Argive inscription (I.G.A. 30).² The official might also be *ὃς ἔχων μέγιστον τέλ]ος*. The meaning of *πρό[γ]ρο[φ]ος* is by no means clear. The word, so far as I know, does not elsewhere occur, but *προγράφω* and *προγραφή*

¹ It is quite probable that the sibilant in Greek represented two different sounds. Cf. Lagercrantz *Zur griech. Lautgeschichte*, p. 105.

² At least it has been with probability so restored.

are common. In later writers these words refer especially to the confiscation of property. The verb means (Lidd. and Scott) "to proclaim an auction," "to sell at auction," "to write at the head of the list." Here $\pi\rho\acute{o}[\gamma]\rho\acute{o}[\phi]\omicron\varsigma$ seems to mean "written at the head of the list." The *demiorgos* is to have the privilege of buying the property, if he wishes, the proceeds to go into the sacred treasury. The *u* in $\acute{\epsilon}\xi\pi\rho\iota\acute{\alpha}[\sigma\theta\omega]$ and $\delta\alpha\mu\iota\omicron[\rho]\gamma\omicron\iota$ confirms the correctness of the double *iota* in $\acute{\alpha}\lambda\iota\omicron\varsigma$ $\gamma\acute{\epsilon}\rho\omega\upsilon$ on the Heracles relief from Olympia (cf. Roehl, *I.G.A.* 34, "*i* male iterata est"), and strengthens Bergk's hypothesis (*Ztschr. f. Numis.* XI, p. 332) of a relation between Pamphylian and Argive. The doubling of the vowel occurs here only before a vowel, and the same is true of Pamphylian, as in $\delta\iota\acute{\alpha}\acute{\alpha}$, $\iota\alpha\rho\acute{\upsilon}$. The ξ before π is not uncommon. In *Ar. Pax* 631 occurs $\acute{\epsilon}\xi\mu\acute{\epsilon}\delta\iota\mu\omicron\upsilon\omicron\varsigma$; *Soph. fr.* 876 b, $\acute{\epsilon}\xi\pi\eta\chi\upsilon\sigma\tau\acute{\iota}$; in Attic inscriptions, $\acute{\epsilon}\xi$ $\pi\omicron\delta\acute{\omega}\nu$ as well as $\acute{\epsilon}\kappa$ $\pi\omicron\delta\acute{\omega}\nu$. The reading may be thus restored: $\tau\acute{\alpha}$ $\delta\acute{\epsilon}$ $\pi\acute{\alpha}\mu\alpha\tau\alpha$ $\alpha\upsilon\tau\acute{\omega}$ $\eta\omicron$ $\delta\alpha\mu\iota\omicron\rho\gamma]\acute{\omicron}\varsigma$ $\pi\rho\acute{o}[\gamma]\rho\acute{o}[\phi]\omicron\varsigma$ $\acute{\epsilon}\xi\pi\rho\iota\acute{\alpha}[\sigma\theta\omega$ $\acute{\epsilon}\nu$ $\tau\acute{o}$ $\delta\alpha\mu\acute{\omicron}\sigma\iota\omicron\upsilon$, $\alpha\iota$ $\beta\acute{\omega}\lambda\omicron\iota\tau\omicron$.

LINES 7 and 8. — $\alpha] \acute{\iota}$ $\delta\acute{\epsilon}$ $\mu\grave{\eta}$ $\delta\alpha\mu\iota\omicron[\rho]\gamma\omicron\iota$ $\tau\iota\varsigma$, "If the office of *demiorgos* is vacant at the time," $\eta\omicron\iota\varsigma$ [$\acute{\epsilon}\dot{\iota}\eta$ $\tau\acute{\alpha}$ $\mu\acute{\epsilon}\gamma\iota\sigma\tau\alpha$ $\tau\acute{\epsilon}\lambda\epsilon\alpha$ $\tau\acute{\alpha}\varsigma$ $\pi\acute{o}\lambda\iota\omicron\varsigma$ $\tau\grave{\alpha}\varsigma$ $\text{'}\text{A}\rho\gamma\epsilon\acute{\iota}\alpha\varsigma$, — "the highest officers of the Argive state may buy the property," — $\kappa\alpha\iota$ $\eta\omicron\iota$ $\phi\omicron\iota$ $\acute{\epsilon}[\gamma\gamma\acute{\upsilon}\tau\alpha\tau\alpha$ $\acute{\epsilon}\dot{\iota}\epsilon\upsilon$ $\acute{\epsilon}\nu$ $\gamma\acute{\epsilon}\nu\epsilon\iota$, — "and (in competition with) the next of kin." In regard to the reading $\eta\omicron\iota\varsigma$, although the plate showed \mathbf{M} , this form must not be insisted upon to the exclusion of \mathbf{M} (μ), as the plate is broken cleanly on the fourth stroke. The clause may then read: $\eta\omicron\iota$ $\mu\acute{\epsilon}\gamma\iota\sigma\tau\alpha$ $\tau\acute{\epsilon}\lambda\epsilon\alpha$ $\acute{\epsilon}\chi\omicron\upsilon\tau\iota$, as in the Elean inscriptions, *I.G.A.* 109, $\delta\rho\tau\iota\rho$ $\tau\acute{o}\kappa\alpha$ $\theta\epsilon\omicron\kappa\omicron\lambda[\acute{\epsilon}\omicron\iota$ and *I.G.A.* 112, $\alpha\iota$ $\zeta\acute{\epsilon}$ $\mu\grave{\eta}\pi\iota\theta\epsilon\acute{\iota}\alpha\upsilon$ $\tau\acute{\alpha}$ $\zeta\acute{\iota}\kappa\alpha\iota\alpha$, $\delta\rho$ $\mu\acute{\epsilon}\gamma\iota\sigma\tau\omicron\upsilon$ $\tau\acute{\epsilon}\lambda\omicron\varsigma$ $\acute{\epsilon}\chi\omicron\iota$ $\kappa\alpha\iota$ $\tau\omicron\iota$ $\beta\alpha\sigma\iota\lambda\acute{\alpha}\epsilon\varsigma$. But in most expressions of this sort the uniform reading is that "in case a certain official is derelict in the performance of his duty, he shall suffer the same penalty as the transgressor." So $\alpha] \acute{\iota}$ $\delta\acute{\epsilon}$ $\mu\grave{\eta}$ $\delta\alpha\mu\iota\omicron[\rho]\gamma\omicron\iota$ $\tau\iota\varsigma$ $\eta\omicron\iota\varsigma$ (viz. $\tau\rho\acute{o}\pi\omicron\iota\varsigma$ $\eta\omicron\iota\varsigma$) $\eta\omicron$ $\nu\acute{o}\mu\omicron\varsigma$ $\kappa\epsilon\lambda\epsilon\acute{\upsilon}\epsilon\iota$, $\alpha\upsilon\tau\acute{\omicron}\nu$ $\phi\epsilon\acute{\upsilon}\gamma\epsilon\upsilon$ $\acute{\epsilon}\kappa$ $\gamma\acute{\alpha}\varsigma$ $\tau\acute{\alpha}] \varsigma$ $\text{'}\text{A}\rho\gamma\epsilon\acute{\iota}\alpha\varsigma$. On the other hand $\eta\omicron\iota\phi\omicron\iota$ may be a dative, as in the Cypriote inscription, *Coll.* 59, β , $\acute{\alpha}\phi'$ $\delta\iota\phi\omicron\iota$ $\tau\acute{\alpha}\varsigma$ $\epsilon\acute{\upsilon}\chi\omega\lambda\acute{\alpha}\varsigma$ $\acute{\epsilon}\pi\acute{\epsilon}\tau\upsilon\chi\epsilon$, or $\omicron\dot{\iota}\phi\omicron\iota$ = $\omicron\dot{\iota}\phi$ (alone), *Coll.*

60, 14. Compare also *ἐοὶ αὐτῷ* Hom. *Od.* 4, 38, *εἰν αὐτῷ*, Gortyna, I, 40, and Apoll. Dyse. *de pron.*, p. 106 (Bekk.), who quotes from Hesiod, *ἐν δ' αὐτῷ θανάτου ταμίας*. Regarded as a dative, the reading would continue the penalty inflicted on the guilty official: *καὶ ἥῳ φοι εἴμεν μηδαμὰ κάθοδον αἰφεῖ*. But *φοι* of line 11 is against this supposition.

Line 9 may have read *αἱ δὲ μὴ βώλουντ]ο, τοῖς Ἡ(λ)λῆς ἀποδόμενοι τὰ πύματα ἐμβαλλέντω (δόντω) ἐν τῷ δαμόσιον τὰν ὠνάν*, "In case the next of kin do not desire (to purchase the property), the tribe Hylleis shall sell it and turn the proceeds into the treasury."

LINE 10. — *γα* is apparently the Doric form of *γε*. Its use after *γᾶς Ἀργείας* indicates that the jurisdiction of the council (?) is limited. Persons outside of Argos may treat the outlaw as they please, but the inhabitants of the Argive land at least are not to recall him.

LINE 11. — *ποι* is probably the preposition. It stands for *ποτί*, according to the *Et. Mag.*: *παρὰ Ἀργείοις ἀντὶ τοῦ ποτί. ἀφαιρέσει τοῦ τ, εἶτα συνόδω. τας* must be the genitive *τᾶς γ]νον* is perhaps part of *ἀναγνον* or *στυγνόν*. The thought here is similar to the thought in Coll. 60, 29, *ὅπισίς κε τὰς φρήτας τάσδε λύση, ἀνοσίῃα φοι γένοιτυ*. These two lines may have read something as follows: *αἱ δὲ τις] γᾶς (τᾶς) Ἀργείας γα κατακ[αλέοι τὸν τρέσαντα (φεύγοντα) ἐν γᾶν τὰν Ἀργείαν, ἀναγ]νόν φοι ἔστω ποί τᾶς Ἡ[ήρας*.

The Source of the Inscription. — The law is clearly Argive, but does not in my opinion emanate from the city of Argos. A law passed by the people of Argos might, to be sure, be set up in the Heraeum, but we know that important laws were kept in the agora. Compare *Ἀθηναίους μὲν ἐν πόλει, Ἀργείους δὲ ἐν ἀγορᾷ ἐν τοῦ Ἀπόλλωνος τῷ ἱερῷ*, Thuc. V, 47. As to the government of the city, we learn from Hdt. VII, 148–49, that there was a king and council, and from Paus. II, 19, that the Argives very early reduced the kingly power so low that nothing but the title of king remained. The Boule probably did not hold sessions in the Heraeum, but the epithet *ἡαγνοι* can

hardly refer to anything but the sanctuary where the bronze was found. The inscription then, I infer, is a compact between Argos and the other towns of the Argolid. The mention of Tiryns and Mycenae on the famous column at Delphi, and the destruction of both cities by the Argives shortly after the Persian wars, prove that the cities were in a measure — if not wholly — independent of Argos at the time of this statute. The Heraeum was the common sanctuary of the three cities,¹ and naturally was the meeting-place for the regulation of matters of common concern. It is quite possible that transgressors had fled from one to another of these towns, and that the present statute is the result of a conference to remedy this state of affairs. Two kinds of criminal action are indicated, one by *συγγέοι*, the other by *θ]άνατον* *ἐ[πι-τεχνῶιτο*. Either one may represent the main provisions of the compact, but in my opinion the fragment contains an ordinance relative to personal violence, which was preceded by the penalty in store for those who in any way tampered with or sought to annul its provisions. It is well, perhaps, to repeat that my conception of the first line has been determined by the similarity of *ραθματα τ αδεν λαγνοι* in words, order, and syntax to common introductory formulas. Since what we have is so like what is wanted and what is so often found in the first line of such laws, there seems sufficient reason for insisting on this interpretation.

The Restoration. — It is easy to fill out the lines, but for this reason exceedingly difficult to restore the original reading. Something unique and a little disconnected perhaps stood in the original, and there is therefore little hope of getting at the exact reading. The bronze was doubtless damaged by the burning of the Old Temple. Where so much has gone up in smoke, it is not to be expected that very substantial results will be obtained by groping about after the missing portions. The following restorations, therefore, are offered merely as a help toward the interpretation of the difficult forms.

¹ Cf. Dr. Waldstein's view (*Class. Rev.* 1900, pp. 473 f.) of the relation of the Heraeum to the neighboring cities.

FIRST RESTORATION

ἡὰ βωλὰ ἐποιρήσατο τὰ ^δγ]ράθματα τάδ' ἐν ἡαγνῶι [ἡιαρῶι τὰς Ηήρας. Αἱ δ-
 ἐ τις ταῦτα καταλύοι]ἡή συγχέοι, τὰς ἀρὰς τὰς [ἐν τῇ στάλῃ αὐτὸς μὲν
 ἔνοχος ἔστω καὶ τρέτω ἐκ]γὰς τὰς 'Αργείας· τὰ δὲ πᾶμ[ατα αὐτῶ πεπράσθω ἐν
 τὰν θεάν. Αἱ δὲ τίς πο]κ[α θ]άνατον ἡή ἄλλο τι καὶ ὄν ἡ[οτιῶν ἡή 'Αργείοις ἡή Τι-
 5 ρυνθίοις ἡή Μυκανῆσι ἐ]πι[τ]εχνῶιτο — ἡ[το]ι φισζέη — [τ]ο[ύ]τον¹ θανάτων καὶ τὸ
 γένος· ἡο δὲ δαμιοργ]ὸς πρό[γ]ρο[φ]ος ἐξπριά[σθω τὰ πάματα αὐτῶ ἐν ἡι-
 ἀρὸν θησανυρόν, αἱ βώλοιο. Α]ἱ δὲ μὴ δαμιο[ρ]γοῖ τις ἡοῖς [ἡο νόμος κελεύει φοι² — οἱ ἡῶι μ[ὲν] κτλ.
 αὐτὸς τρέτω ἐκ γὰς τῶ]ς 'Αργείας· καὶ ἡοῖ φοι ἐ[γγύ]τατα εἶεν γένει ἐξπ-
 ριάσθων. Αἱ μὴ βώλουντ]ο, τοῖ Ηυ(λ)λῆς ἀποδόμ[ενοι τὰ πάματα δόντω
 10 ταῖ θεῶι. Αἱ δὲ τίς ποκα]γὰς 'Αργείας γα κατακ[α]λέοι τὸν ἐξελαθέντα
 ἡή προθεῖτο ψᾶφον, ἀναγ]νόν φοι ἔστω ποῖ τὰς Ηήρας.

TRANSLATION

The council adopted the following covenant in the sacred precinct of
 Hera. If any one should destroy or deface these covenants, he shall be
 subject to the curse that is written on the stelæ, shall be exiled from the
 Argive land, and his property shall be sold for the benefit of the goddess.
 If any one should at any time contrive death or any other evil whatsoever
 against the Argives or Tirynthians or the people of Mycenæ — in truth
 should he know of it — he shall die and his (immediate) family. The demi-
 orgos is to have the precedence (at the head of the list) in the purchase of
 the exile's property for the benefit of the sacred treasury if he so desires.
 In case some one should not perform his public duty, as the law prescribes,
 he too shall flee from the Argive land. And the nearest of the surviving
 kindred of the exile shall buy the property. But if they do not wish to, the
 tribe Hylleis, having sold it, shall give the proceeds to the goddess. If any
 one from the Argive land should at any time recall the banished man, or
 should offer a vote to that effect, it shall be an unholy act in Hera's sight.

SECOND RESTORATION

φράτρα βωλᾶς. Αἱ τις τὰ ^{ια}γ]ράθματα τάδ' ἐν ἡαγνῶι [ἡιαρῶι τὰς Ηήρας
 ας ἡή ἐκκόπτει]ἡή συγχέοι, τὰς ἀρὰς τὰς [κειμένας αὐτὸς μὲν ἔνο-
 χος ἔστω καὶ φευγέτω ἐκ]γὰς τὰς 'Αργείας· τὰ δὲ πᾶμ[ατα αὐτῶ τὰς θεῶ
 ἔστω. Αἱ δὲ τίς πο]κ[α θ]άνατον ἡή ἄλλο τι καὶ ὄν ἡ[οτιῶν τῶι ταῦτα πεποιρη-
 5 κῶτι αὐτὸς ἡή δι' ἄλλω ἐ]πι[τ]εχνῶιτο ἐ[ν] ὦ]ι φισζέη [Ῥ]ο[ύ]θαρὸς ἔστω πᾶν-
 τα· ἡο δὲ δαμιοργ]ὸς πρό[γ]ρο[φ]ος ἐξπριά[σθω τὰ πάματα αὐτῶ ἐν τὸ
 δαμόσιον, αἱ βώλοιο. Α]ἱ δὲ μὴ δαμιο[ρ]γοῖ τις, ἡοῖ μ[έ]γιστα τέλεα ἐ-
 χοντι πόλιος τῶ]ς 'Αργείας καὶ ἡοῖ φοι ἐ[γγύ]τατα εἶεν ἐν γένει ἐξ-
 πριάσθων. Αἱ μὴ βώλουντ]ο, τοῖ Ηυ(λ)λῆς ἀποδόμ[ενοι δόντω ἐν τ-
 10 ἂν θεάν. Αἱ δὲ τις]γὰς 'Αργείας γα κατακ[α]λέοι τὸν τρέσαντα ἡή
 ψαφίσχοι κατακαλέεν, στνγ]νόν φοι ἔστω ποῖ τὰς Ηήρας.

JAMES DENNISON ROGERS.

¹ Or [ρ]ο[ύ] θάνατος ἔστω κτλ.² Or ἡοῖς [προστέτακται κτλ.

American School
of Classical Studies
in Rome

THE ROMAN AQUEDUCTS AS MONUMENTS OF
ARCHITECTURE

It will be well, before beginning this paper, to define its title. The word *architecture* is so broadly and so narrowly used that one may hardly venture to employ it until he has determined the limit of its application. It is impossible to eliminate from architecture the factor of usefulness, though this is larger in some structures than in others. In some it predominates, and then people are disposed to call it engineering. But architecture is distinctively the *art of design* or of composition, and the term may be applied to structures which, though they may have no claim to beauty of detail, give evidence, in the composition and proportions of their masses, that their builders had a care for appearances, and purposely aimed at producing an effect of dignity and elegance suitable to the character of the monument. It is in this sense that we shall consider it.

The aqueducts of Rome have been amply and exhaustively treated by writers in ancient and modern times. They have been the subject of the most careful study of civil and hydraulic engineers ever since these two sciences were first developed. Books and papers have been written upon them from the point of view of the engineer and of the archaeologist, from Frontinus, the *Curator Aquarum* of the Emperor Trajan, to the famous archaeologists of our day. Architectural writers have either omitted all reference to them or have mentioned them only to say that they do not properly belong to the architectural domain. But wherever stone is dressed and laid in regular or

symmetrical courses, the elements of architectural design are in evidence; any building in which string courses appear, or in which the openings are symmetrically disposed, illustrates a theory of composition and is consequently to be recognized as architecture; and where mouldings and decorative details are employed in connection with symmetrical design a structure meets the requirements of even the most superficial definition of the art.

The earliest of the Roman aqueducts that were constructed above ground, could boast of many, if not all, of these elements; the first of them, belonging to the republican era, was not only built of the most carefully cut and fitted blocks of stone, but consisted of a series of piers and arches, designed with the utmost regard to symmetry and proportion, was relieved by projecting string courses, where these were required to break the monotony of the surface and to give finish and character to the design, and was embellished at intervals with carved mouldings.

Later, under the Empire, we find patterns wrought in stones of different colors to adorn the arches and the side of the water conduit, and mouldings made by allowing courses of brick to project and cutting them into a desired form. In short, the architecture of the best Roman period can be well studied from an examination of the aqueducts alone. Here we may study the dry, cut stonework which characterized the republican period; the concrete, faced with stone or brick, of the Empire; or design as illustrated in the proportions of mass and space, and in the enrichment of buildings by means of the studied disposition of materials.

The Roman architects when they built for pleasure drew upon Greek art to furnish decorative details, and concealed the true nature of their construction by a sham of entablatures and columns. When they built for utility they were no longer bound to employ imported ornament and depended upon their native sense of symmetry and proportion and upon the use of simple mouldings or of color to secure a sufficiently pleasing effect.

The aqueducts are thus perhaps the most truly national structures erected by the Romans, simple, truthfully structural, without the pretence of columns or ornamental entablatures.

In this paper, therefore, we shall avoid those portions of the aqueducts that partake of a festal or monumental nature, such as the Porta Maggiore, the Porta San Lorenzo, and the Arch of Dolabella, for these depend upon the ordinary architectural details for their effect, and shall confine our study to the aqueduct itself.

The aqueducts of the Romans may be divided into three general groups, according to the materials of which they are constructed. This classification is the more convenient in that it conforms very nearly to their chronological arrangement.

The earliest of these monuments that show any architectural character was built entirely of cut stone, laid dry in regular courses; it belongs to republican times, having been begun 144 B.C. and finished very soon thereafter. During the early Empire the Romans continued to employ *tufa* and *peperino* cut and laid in a similar manner, though with rather less care and precision. The greatest of all the Roman aqueducts was so constructed under the Emperor Claudius.

But even under Augustus it had become the custom to build the smaller aqueducts, and those in the provinces, of concrete faced with a revetment of stone laid in courses or in the form of *opus reticulatum*. Some of the most beautiful specimens of aqueduct architecture were thus constructed. But this custom did not obtain for any great length of time. Under Nero the first and finest of the brick-faced aqueducts was built. This period is well known as the best for brickwork. From this time aqueducts, in Italy at least, seem to have been made invariably with brick facing, and all the repairs upon the older aqueducts were carried out in brick, down to the reign of Alexander Severus, under whom the last of the great aqueducts was erected. It will thus be seen that the periods of classification overlap slightly, whether we make the division purely chronological, or according as the aqueducts were con-

structed of free stone, of concrete faced with reticulated work, or of concrete and brick.

It is impossible in a paper of this character to take up all the aqueducts built in the Roman domain. We shall therefore select only the most characteristic examples, wherever found, to illustrate the three classes of aqueducts mentioned.

I. AQUEDUCTS IN STONE

Aqua Marcia (Fig. A 1 and 2). — The finest and oldest example of an aqueduct in free stone was built in the year 144 B.C., by Quintus Marcius Rex,¹ and called, from the name of the builder, the Aqua Marcia.

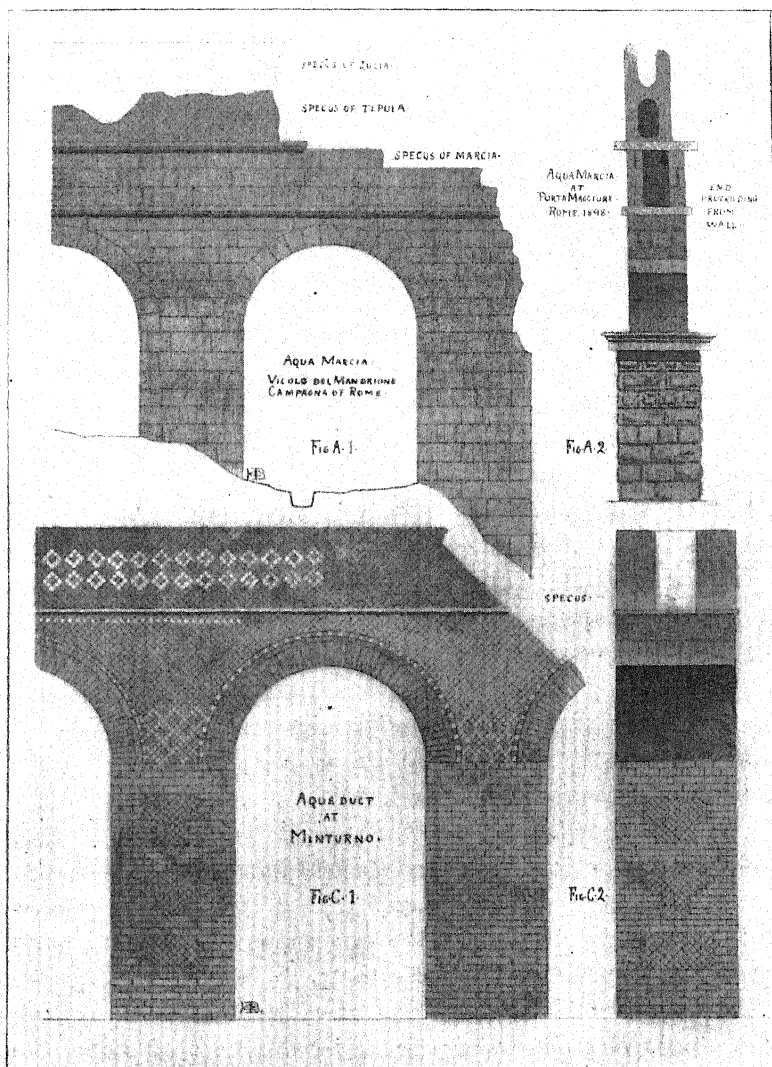
The few fragments of this great work that remain preserve to us some of the most perfect specimens of stonework known. These are found at widely separated intervals between the ancient Porta Tiburtina near the Porta San Lorenzo, and a point some distance beyond Roma Vecchia, where the aqueduct finds the level of the earth. It will not be serviceable for our purpose to examine this aqueduct where it emerges from the ground again among the Alban Hills, for here renovation and restoration have nearly obliterated the original work, which moreover was inferior to the portions nearer Rome.

Extant Portions. — The portions of the Marcia still extant are found first at the Porta San Lorenzo, where the aqueduct is carried over the arch of the gate, and where three arches of stone, to the right of the gate, are visible in a mass of brickwork. Again, beside the Porta Maggiore, to the left as you pass out, a portion of the water conduit or *specus* is to be seen in the Aurelian wall, over a part of one of its own arches and a heavy pier built into the wall (Fig. A 2). For a long distance thence it has been totally destroyed, until we come to the Vicolo del Mandrione (Fig. A 1) not far from the ancient Via Labicana, where some ten more arches are preserved intact, with the *specus* above them. The stonework of these arches is practi-

¹ Frontinus, *De aquis urbis Romae* : I, 7 ; Clemens Herschel, *Frontinus and the Water Supply of the city of Rome*, pp. 5-7, Boston, 1899.

cally concealed by the restoration in brick of later times, but enough of the original structure can be seen to make it a very valuable monument.

Beyond this, the line of the aqueduct may be traced for



FIGURES A AND C.—THE AQUA MARCIA AND THE AQUEDUCT OF MINTURNÆ.

some miles by that of the mediaeval and modernized aqueduct, the Aqua Felice, which was built partly upon the foundations and largely from broken pieces of the ancient Marcia. Some distance beyond the *osteria* of Capanelli, not far from Sette Bassi, after the Felice has entered the ground the *specus* is again found above two groups of very low arches. These two groups are separated by only a hundred yards or so, and comprise, the one eighteen arches, and the other ten. Only the crowning voussoirs of many of these arches are now visible above the soil, but the *specus* is comparatively well preserved. From these widely separated remnants it is easy to see by a comparison of measurements that the aqueduct was constructed on a practically uniform design throughout.

Materials.—The most available material was used in every part, the main portions being made of *tufa* and a hard variety of *tufa* known as *sperone* (*lapis Gabinus*). The still harder *peperino* (*lapis Albanus*) is introduced in the foundation of piers, in the course at the top, and in that at the bottom of the water conduit, where travertine is also employed in some places, as for instance over the arches near the Porta Tiburtina.

Treatment.—The working of this material, the cutting and fitting of the joints and the smooth finish of the exposed surfaces, can be fully appreciated only where the encasing wall of late restorations in brick has been recently removed. It is one of the most interesting and instructive features of the aqueduct, and is perhaps the finest extant example of the exquisite *opus quadratum* of the republican period.

The blocks of stone, practically uniform in size, average 0.60 m. \times 0.60 m. \times 1.24 m., and are laid in regular courses with alternate headers and stretchers. No mortar is used, but the stones are so closely joined that one cannot, even now, insert the thinnest knife blade between them.

The voussoirs of each arch are cut with the utmost precision and consist alternately of one and two pieces of stone, the former extending through the entire soffit of the arch and measuring 0.54 m. (mean) \times 0.57 m. \times 1.72 m. The courses of

stone above and below the *specus* are 0.25 m. thick, projecting on either side 0.20 m., and are one stone wide. The walls of the *specus* consist each of three equal courses, usually stretchers. These walls are only 0.47 m. thick. The joints between the courses of this part are evenly cut and laid dry, but at the ends of the blocks is cut a perpendicular groove, of semi-circular section, 0.12 m. in diameter (Fig. A 2). When two blocks are in position, a cylindrical bore is formed between them. This was filled with very fine cement, which, when hard, formed a most effectual pin, making the courses like a single stone and affording to the concrete lining (*opus signinum*) of the *specus* protection against earthquake shock. These considerations, though purely structural, serve to illustrate the care and exactitude with which the main portions of the aqueduct were built.

Proportions.—We have now to consider the general lines of composition which seem to have governed the design. The span of the arches seems to have varied but slightly (5.08 m. to 5.38 m.), and the width of the piers, measured at right angles to the long axis of the aqueduct, is constant (2.62 m.). With these measurements practically fixed, the proportions of the structure, as affected by the variations in altitude, which are of course governed by the differences in surface level, are secured by varying the longitudinal dimensions of the pier and the distance between the extrados of arches, the soffit being always flush with the surface of the pier at the spring of the arch. Thus, near the Porta San Lorenzo, where the arches were raised only slightly above the surface (though much higher than at present), the piers measure 1.89 m. to 1.93 m., with only 0.75 m. between the voussoirs of two arches, while at the Vicolo del Mandrione, where we have the highest consecutive arches of the Marcia, the same measurement is 3.22 m. to 3.60 m., with 2.40 m. from extrados to extrados.

The element of safety doubtless entered largely into this scheme of proportions, but strength could quite as easily have been secured by building the higher arches narrower and thus

varying the span, as was done in some of the later aqueducts (*e.g.* Felice); but this would have destroyed the symmetrical, architectural effect, which the builders apparently wished to preserve. At the point where the level of the ground rises to that of the *specus* and the aqueduct gradually disappears, the arches are still continued with extrados tangent until they are completely buried in the soil. This also, I believe, was the expression of an aesthetic motive on the part of the architects, for certainly no utilitarian end demanded so much greater an outlay than a solid substructure, such as was employed in later aqueducts, would have required.

Mouldings.—The uppermost course of the piers is in some cases, as at the Porta San Lorenzo and the Porta Maggiore, allowed to project, and is cut to form a cornice (Fig. A 2). But farther out on the Campagna a simple flat shelf, 0.46 m. wide, marks the difference in width between the pier and the superstructure. A narrow course, 0.20 m. high, separates the key-stones from the projecting course below the *specus*. Where the material is travertine this projecting course, with its counterpart above, is not moulded, but where *peperino* is used the lower edge seems to have been chamfered off into a sort of cornice. But whether these overhanging string courses are moulded or not, they serve the purpose of breaking up the monotony of the surface, of indicating the various divisions of the structure, and thus of imparting to it an architectural character.

Aqua Claudia (Fig. B, 1, 2, 3).—The next and last of the stone aqueducts was the greatest and most imposing of them all. This is the Claudia, which Frontinus dignifies above all others as having been completed *magnificentissime*,¹ and dedicated August 1, 52 A.D., on the birthday of the Emperor whose name it bears. This aqueduct was begun under the reign of Caligula in the year 38 A.D.,² to supply the increasing demand for water, particularly in the higher portions of the imperial city. The scale upon which it was undertaken far exceeded that of any similar construction that had been previously pro-

¹ Frontinus, I, 13.

² *Ibid.*

jected. The stupendous work completed some years before at Nemausus (Nîmes), by which a large volume of water had been carried at a tremendous height over a deep valley, is comparable in many respects; but while the *Pont du Gard* is a lofty

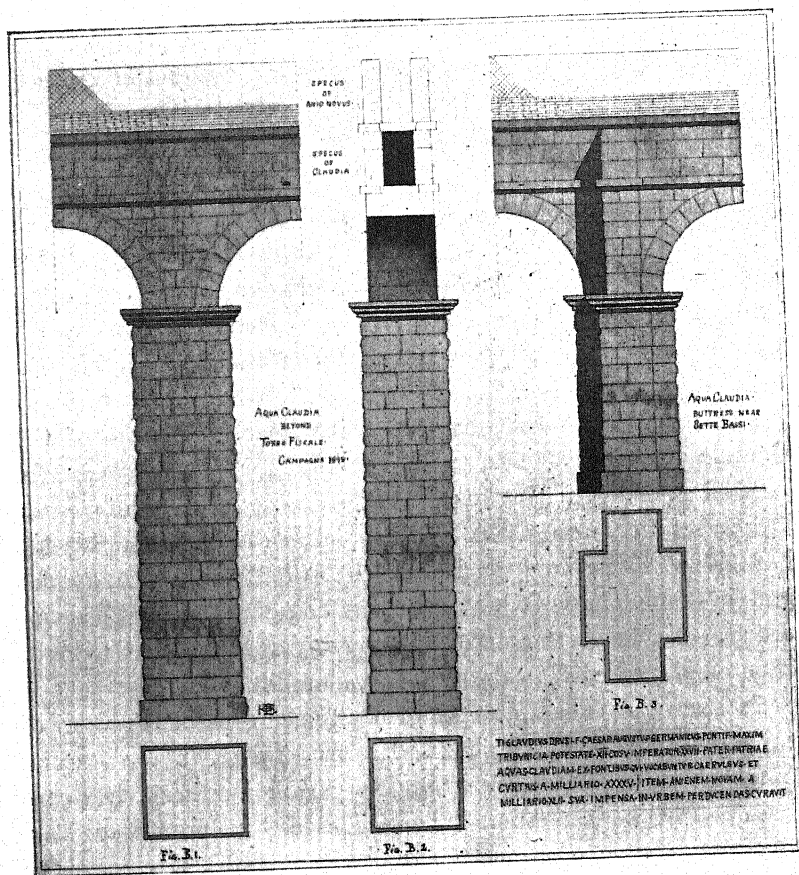


FIGURE B. — AQUA CLAUDIA.

bridge of stone some 270 m. long and 49 m. high, wonderfully conceived and admirably executed, the Claudian aqueduct manifests a skill almost as daring over many miles of length.

The plan and design of the Claudia are substantially a magnified repetition of the Marcia; but it is interesting to note the

various differences which, from the architectural standpoint, give it a character all its own.

Portions Extant.—Large portions of the Claudia stand intact in groups of from four to eighteen arches, all the way from the Porta Maggiore to Roma Vecchia, near which place begins an unbroken series of 155 piers and 154 arches,¹ which continues almost to the point where the aqueduct enters the ground. Some of these groups preserve, unrestored, the highest portions of the aqueduct, that near the railway beyond Torre Fiscale being over 27 m. in height. Other groups are supported between the piers by substructures in brick, the reparations of the later Empire. Others still are completely encased in the coarse masonry of the decline. For some distance beyond the Porta Furba these encasing walls stand free, the stone which they were built to support having been carried away in old Papal days.

Material.—The stone employed in the construction of the Claudia differs somewhat from that used for the Marcia; here we find a predominating use of *peperino* with red and yellow *tufa* in smaller proportions. The quality of the *peperino* used here is not to be compared with that of the older aqueduct, and in some places it, as well as the *tufa*, is crumbling to decay. No travertine or other harder material seems to have been employed even in the bonding courses.

Treatment.—It is doubtless owing to the greater friability of the stone that the cutting is far less exact than in the Marcia, although all the stonework of this period manifests less care than that of the Republic. The courses of stone are not regular, the joints are not closely made, and the surface seems never to have been dressed. On the other hand, it may be said that in some respects the work upon the Claudia is quite as admirable. The enormous size of the stones used is certainly remarkable. Some of them extend the entire width of a pier, being about 3.10 m. long. The courses are laid dry and are of unequal height, averaging about 0.67 m. Of the seventeen voussoirs

¹ Lanciani, *Comm. di Front.*, viii, 3.

which form each arch, a few are found to be made of a single stone; but there are usually two or three pieces to each voussoir in the soffit.

Design.—The difference in design between the earlier and later aqueduct begins to manifest itself at the bottom, where a base of hard *peperino* projects some 0.15 m. from the faces of the pier. The pier is then carried up with a mean width of 3.21 m. and a longitudinal measurement varying from 3.35 m. to 3.66 m. It will be seen that the pier is more nearly a square in plan, and that its proportions are not determined by variations of altitude. Below the springing of the arches the pier is provided with an overhanging course which forms a heavy impost moulding 0.35 m. deep. The arches, whose span is about 5.60 m., are only 2.52 m. wide, and the distance between the intrados of two arches is 2.60 m., so that the impost is much smaller in section than the pier (compare Fig. B 1 with Fig. A 1). The course which forms the bottom of the *specus* is imposed directly upon the voussoirs and projects on either side 0.22 m., but is not moulded. The corresponding course above the conduit is similar to it. Neither of them is carried through the width of the *specus* in single stones, the lower course below the lining of the conduit itself consisting of rubble laid immediately upon the arch, and the upper course being made up of three stones, with joints not centred upon the *specus* wall (Fig. B 2).

The *specus* walls consist again of three courses, each 0.66 m. high. The walls are 0.65 m. thick. The conduit measures thus 1.85 m. high by 1.22 m., inside measurement, to 1.65 m. \times 0.75 m. of the Marcia.

Mouldings.—The only moulding used to embellish the long stretches of the Claudia is at the impost, where a cap, 0.55 m. deep, breaks the transition from the pier to the arch construction. The projecting courses above and below the *specus* are uncarved.

II. AQUEDUCTS IN CONCRETE AND *OPUS RETICULATUM*

The use of concrete faced with stone in the form of *opus reticulatum*, which became almost universal in all forms of Roman construction with the advent of the Empire, was very early applied to the building of aqueducts. The two great aqueducts which were made for the supply of Rome after the completion of the Marcia—the Tepula and the Julia—were constructed largely in this manner, the former 163, the latter 71 years before the Claudia was begun.¹

Aqua Julia and Aqua Tepula.—These two aqueducts may be studied in connection with the Marcia, at the various places already noted, where the Marcia is intact (see Fig. A 1 and 2); for from the point where that aqueduct emerges from the earth near Sette Bassi, their conduits are carried above that of the Marcia, the Julia above the Tepula. The *specus* of an aqueduct is scarcely enough to furnish a topic of architectural discussion, but a point or two of contrast here should be marked.

The water conduit of the Tepula is far better preserved than that of the Julia, which has almost completely disappeared. It is considerably smaller than that of the Marcia, measuring in extremes only 0.60 m. to 1.15 m. (inside measurement). A section of this conduit at Vicolo del Mandrione is nearly oval in form, the lines of the bottom being brought almost to a semi-circle by the *opus signinum* and the top consisting of a rather acute vault of masonry.

The walls of the *specus* are of the strongest concrete, faced with an early form of reticulated work. They measure 0.47 m. in thickness. No course of stone divides the Tepula from the Julia, the masonry between the conduits being about 0.40 m. thick, exclusive of the *opus signinum*. Over the Porta San Lorenzo, where the three superposed *specus* are constructed of travertine, these measurements still hold good, the Marcia consisting of three equal courses, the Tepula of two courses of the same width, and the Julia of four.

¹ Frontinus, I, 8, 9.

It is to be noted that, both at the Porta Maggiore (Fig. A 2) and at the Vicolo del Mandrione, the *specus* of the Tepula is not centred over that of the Marcia, but is 0.40 m. to the left, as the water flowed.

The Aqueduct of Minturnae (Fig. C 1 and 2; Figs. 1-3).—For a well-preserved specimen of this class of aqueduct, however, one in which the more truly architectural features may be readily studied, it will be necessary to look beyond the immediate province of Rome, though not so far away as to be beyond the direct influence of the architectural forms and methods practised in the imperial city.

Perhaps the finest extant example of the reticulated work of the early empire is the aqueduct which furnished water to the long-lost city of Minturnae, a town of the Volsci, situated on the sea near the mouth of the ancient Liris, a city of considerable size and importance in its day, but of which the only preserved relics are the outer wall of the cavea of its theatre (also in reticulated work) and this noble stretch of aqueduct. It is preserved in an almost unbroken line for about two miles (three kilometres) from the *castellum*, where the water was divided for the use of the city, to the hills, where perches the mediaeval and modern descendant of the ancient town, the village of Minturno.

So far as I have been able to discover, this fine monument has hitherto been only barely mentioned in archaeological publications. A description of its architectural features will not be out of place in this paper, and a more careful study of its use and structure from the engineer's point of view is certainly merited by its extent and importance.

So little investigation has been carried on at the site of ancient Minturnae that no precise date can as yet be assigned to its monuments. It will be necessary then to compare the structure of the aqueduct with that of buildings whose age is known, in order to assign to it even an approximate date.

Reticulated work of the character displayed in this monument is rare. Its chief points of distinction are the regularity and

evenness with which it is laid, the quoins and levellers in brick-shaped stones, and the small stone voussoirs of the arches.

In Rome itself but a single monument is to be found which displays characteristics similar to these. This is the ruin of an Emporium on the banks of the Tiber near Monte Testaccio. Here one finds voussoirs of *tufa* cut to a wedge shape and comparing with those of Minturnae in size and form. But these are used in connection with *opus incertum*, and the date is fixed by archaeologists at 176 B.C. At Minturnae on the other hand they are used with the *opus reticulatum* of the best period. It

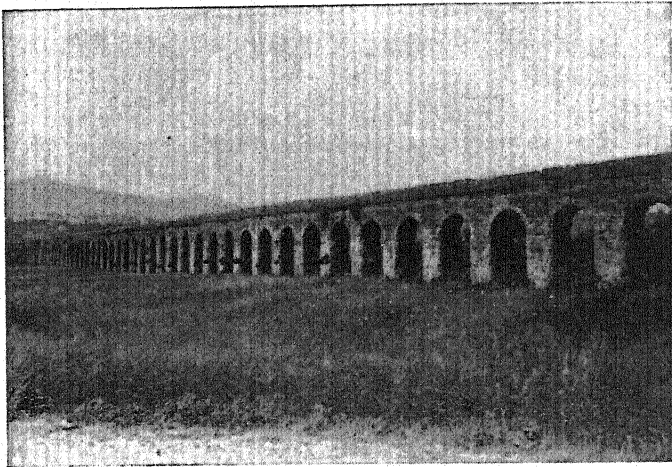


FIGURE 1. — THE AQUEDUCT OF MINTURNÆ, LOOKING TOWARD THE HILLS.

was early in the reign of Augustus that bonding *opus reticulatum* with stone gave way to bonding with brick, as may be seen in the houses on the northwest slope of the Palatine, whose date is known; and all the *opus reticulatum* in Pompeii, which belongs to the period of restoration, after the earthquake of 63 A.D. is so treated. The use of stone throughout would seem, then, to make it impossible to place the date of this aqueduct later than the end of the reign of Tiberius; and the regularity of the reticulated work precludes a date earlier than the time of Augustus, so that we feel safe in placing the monument within the first twenty years of our era.

Portions Extant.—The aqueduct of Minturnae is intact throughout the greater part of its extent. Beginning at the ruin of the *castellum*, we have first two broad arches and then four of the regular size. This brings us to a point where the aqueduct has apparently been purposely destroyed for a space of about 16 m. to allow the passage of the modern high-road. Then begins a splendid series of one hundred and twenty unbroken arches, carrying the aqueduct on a level line away toward a ridge, where the arches become lower and lower until they are

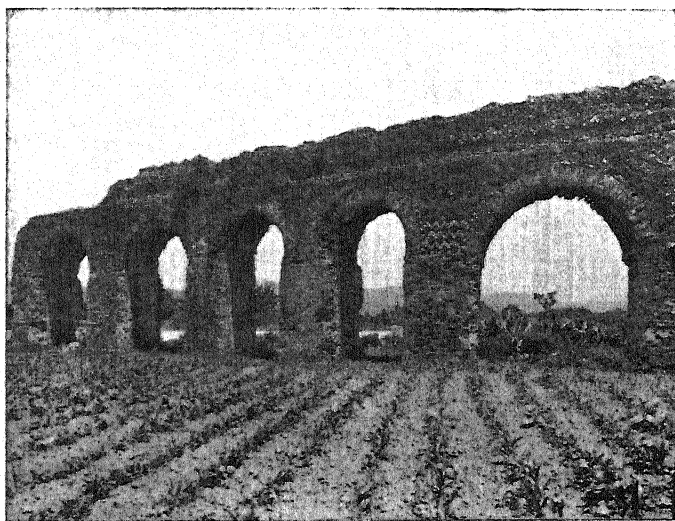


FIGURE 2. — THE AQUEDUCT OF MINTURNÆ, NEAR THE CASTELLUM.

replaced by some 50 m. of solid substruction. When the ridge is crossed, another series of thirty-nine low arches begins and carries the *specus* until it strikes the surface again on the other side of the plain.

At the fifty-seventh pier an obtuse angle is made in the aqueduct, whence it bears slightly to the left. At the forty-fourth and eighty-third piers we have broader arches, which in both cases doubtless marked the passage of roads.

Materials.—The Minturnae aqueduct is a massive structure of concrete, made up of small bits of black *tufa* embedded in the

strongest variety of *pozzolana* and faced with *opus reticulatum* of the hardest black *tufa*, bonded at all external angles with brick-shaped quoins of the same material, interspersed with similar blocks of limestone (Fig. C 1). The top of the piers, the point where the arches spring, is often provided with a layer of broad, square tiles, as is also the course separating the *specus* from the substructure.

Treatment.—The individual blocks of the reticulated work measure about 0.08 m. \times 0.08 m. on the surface, and penetrate fully 0.12 m. to 0.15 m. into the masonry. They are laid with the utmost precision, and are cut to fit closely to the brick-shaped stones, which measure 0.08 m. \times 0.095 m. \times 0.20–0.27 m., and are all laid end to end. The bases of the piers are built entirely of these quadrangular blocks of limestone in six or more courses. Above these we find six courses of limestone alternating with six of *tufa*. It will thus be seen that the piers, which measure in plan 1.90 m. \times 1.90 m. on an average, with their lower portions and angles laid in bond, show very little reticulated work (Fig. C 1 and 2).

The arches span ordinarily about 2 m. They consist of forty-seven to forty-nine voussoirs cut precisely to a wedge form 0.38 m. long, 0.06 m. wide at bottom, and 0.10 m. at the top. The soffits and archivolts are flush with the surface of the piers. The soffit of each arch was furnished with a thick coating of plaster, which in many instances is still well preserved.

Above the arches and between them, all is built of *opus reticulatum*. The line of the bottom of the *specus* is marked by a level course of thin tiles which divides the reticulated work. The interior width of the *specus* is 0.56 m.; its lining is the finest kind of *opus signinum*. The upper portions of the *specus* have been so badly broken that it is impossible to determine whether the canal was open to the sky or vaulted over. It is almost certain that no coping of stone ever existed. The wall of the *specus* is 0.64 m. thick and about 1.33 m. in height where it is best preserved.

Design.—In its proportions this aqueduct does not differ widely from those built of cut stone. The arches are perhaps somewhat narrower in comparison with the piers, but these, being approximately a square in section and comparatively slender, give an appearance of lightness remarkable for a structure in concrete. The ratio of the distance between the top of the pier and the lower course of the *specus* to the height of the *specus* wall is that of two to one, and is very successful.

There are no mouldings whatever, but in decorative effect this aqueduct far surpasses many of those of Rome itself. It is the use of two kinds of stone, of two different colors arranged in patterns, that makes this aqueduct distinct among structures of its kind, even among structures in this material, and gives it rank of importance among monuments of architecture from the decorative standpoint.

The ornamental use of *opus reticulatum* must have been exceedingly rare among the Roman builders, for almost no specimens of it are anywhere to be found.¹ The place of this monument is thus quite unique in the history of Roman architecture (Fig. C 1).

The *tufa* employed in this work is, as has been said, quite black and the limestone very white, hard, and close grained. The combination of colors appears first in the bases of the piers, where alternate courses of *tufa* and limestone give a variegated effect. Above this point all the piers are of *tufa* only, the bond work predominating over the reticulated.

The decoration is richest at the springing of the arches. The extrados of the voussoirs, which are all of *tufa*, is provided with a semicircular course of oblong stones, set end to end, upon which is set a semicircle of the small pieces used in reticulated work, alternating black and white. The spandrils are enriched with diaper work, carried out in the *opus reticulatum* in a great

¹ Other examples of polychrome *opus reticulatum* are to be found in the ruin of a Roman villa on the road from Tivoli to Hadrian's Villa, under Casino Braschi, visible from the high-road, and in a large Roman tomb near Homs, in Syria.

variety of figures, zigzag, diamond, and checker-board patterns, alternating with parallel and diagonal lines of white upon a black ground.¹ The decoration of the *specus* wall seems to have varied in different portions of the aqueduct. In some places we find a single, in others a double row of vertical squares of white, in others simple alternating rows of black and white. It is interesting to note that this decorative work is not applied to the whole length of the aqueduct, nor confined to the portion near or within the city limits. We find the part adjoining the city



FIGURE 3. — THE AQUEDUCT OF MINTURNÆ, LOWER ARCHES OF LONG SECTION. SHOWING VARIOUS PATTERNS.

thus embellished, it is true, but richer decoration was applied to the aqueduct at intervals along its course far from the town, even at the point where the arches spring from the ground level. It is possible that these portions may have been decorated owing to their proximity to suburban villas; and indeed I found extensive ruins not far from a series of arches so embellished; but no reason for this intermittent adornment can be assigned with certainty.

¹ Figure C shows only a few of the patterns and is not drawn from two consecutive pieces, but two separated by a few yards.

III. AQUEDUCTS OF CONCRETE AND BRICK

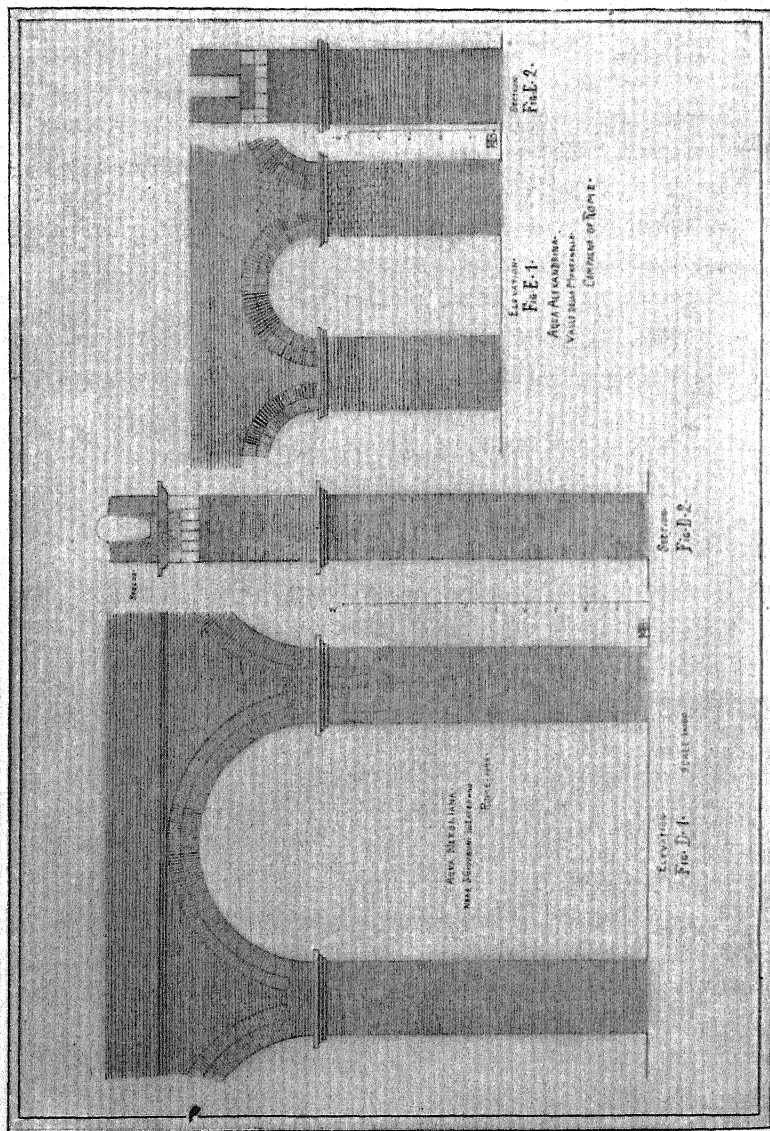
The reign of Nero is well known to have been the best period both for the making and the laying of brick. No brickwork in all the history of Roman building, none perhaps in the whole history of architecture, can rival the specimens that we have dating from 50 to 70 A.D. This is true, not only of the work that was used as a revetment to concrete, and intended to be seen, but also of that which was employed in the hidden portions of buildings as a bond to other materials.

Comparatively few of the monuments of Nero's reign that were constructed entirely of concrete and brick have come down to us. Of these the *arcus Caelimontani* are beyond question the most extensive and the most perfect.

Aqua Neroniana (Arcus Caelimontani) (Figs. D 1 and 2).—This aqueduct was built to convey the Aqua Claudia and the Anio Novus from the Porta Maggiore to the temple of Claudius on the Caelian hill.

Portions Extant.—Copious fragments of this aqueduct may still be seen, beginning in the gardens of the church of SS. Giovanni e Paolo, near the site of the temple of Claudius, and running along the slopes of the Caelian to the Porta Maggiore, *ad Spem veterem*.¹ The first group comprises ten piers with a few arches, and extends to the arch of Dolabella. The second runs along the Via di S. Stefano Rotondo, forming a sort of wall to the grounds of the Military Hospital. Here there are about thirty piers. Then comes a break in the line until we reach the Restaurant del Cocchio, on the northern side of the Piazza S. Giovanni in Laterano, at the end of the Via Merulana. Two arches of the aqueduct, preserving the *specus* above them, are incorporated with this building. At the eastern side of the piazza, beside the Passionist Convent, the line begins again with three fine consecutive arches bearing the *specus*, and a group of six piers with two arches. After a short break at the Via Emmanuele Filiberto, the line is taken up again and carried

¹ Frontinus, I, 20.



FIGURES D AND E.—AQUA NERONIANA AND AQUA ALEXANDRIANA.

almost unbroken through the Villa Wolkonsky by thirty piers, with the *specus* preserved over a number of them, and through a vineyard near the ruins of the baths of Santa Elena, by nineteen piers, to the road which leads from the Porta Maggiore to S. Croce in Gerusalemme. Here are four arches, well preserved and somewhat restored, bearing the *specus* as far as the Aurelian wall, where it joined the Claudia.

Material.—The concrete which forms the core of the piers and arches is not of the kind ordinarily met with in Roman ruins. The proportion of mortar used is much smaller, and the yellow *tufa* and broken tiles are laid in courses with comparative regularity, so that in a broken section they give almost the appearance of solid brickwork. The facing bricks are of the hardest sort, well and regularly moulded, with sharp edges fitting closely together. These are set with a minimum of fine cement, the joints showing hardly a centimetre of width.

The only other material employed was travertine, three large blocks of which are inserted just below the springing of the higher arches.

Design.—The proportions of the Neroniana were a new departure in the designing of aqueducts; the relation of voids to solids, instead of being that of five to three, or even less, as heretofore, is now nearly ten to three.

A second new departure was the introduction of two stories of arches in certain parts of the aqueduct.¹ To describe minutely the design of the aqueduct at the various points where it is preserved is unnecessary, for the separate sections differ only in minor details and offer no real contrasts. Let us therefore choose a point where the aqueduct is typical and well preserved, and study more closely its form and dimensions.

The fine group of three arches beside the Scala Sancta is the best specimen of the single-arched type (Fig. D 1). The piers here are nearly square in section, 2.10 m. wide by 2.40 m. long. At this point they are about 10.50 m. high. The space between the piers measures 7.75 m. and is spanned by a broad semicircular

¹ Where the arches are double, the proportion of solid to void is increased.

arch consisting of two concentric rows of wedge-shaped bricks, 0.047 m. wide at top and 0.025 m. at bottom. The bricks of the upper row are 0.43 m. long, those of the lower, 0.56 m. The archivolts and soffits are flush with the faces of the pier, though separated from them by mouldings, and the line of the *specus* is marked by a moulding tangent to the upper curve of the arch of bricks. The *specus* is 0.86 m. wide and 1.60 m. high, outside measurement. The walls are 0.57 m. thick.

This aqueduct, from the lightness and grace of its proportions alone, would merit careful study as an architectural monument. When with these are considered the elegance of the material and the skill of the workmanship, there can be little doubt as to the right of this particular aqueduct at least to be reckoned as architecture, for while it involves the same engineering principles that governed the construction of the earliest aqueduct above ground, it exhibits the culmination of a progressive problem in design. The architectural interest of this aqueduct is enhanced by the color of the brick, a luminous shade of light reddish brown which takes beautiful effects in changes of light and shade. This color is not everywhere the same, for in some of the more conspicuous places, as in the arch over a street near the Porta Maggiore, we find one row of bricks of the common brown color and one of a light yellow. Thus again polychromy is brought into play in the design of an aqueduct.

Mouldings.—The mouldings of this aqueduct are similar throughout, and are in greater profusion than in any of the monuments already described. A wide cap projects on all sides at the top of each pier, composed of three layers of large square tiles, each overlapping the one below, the second being chamfered off diagonally. These courses of tile are carried through the masonry, forming a solid impost for the arches. A similar string course, similarly constructed, and four tiles deep, is placed immediately below the *specus*. These courses have both a utilitarian and an artistic purpose, for while they aid greatly in giving solidity and compactness to the structure, they also constitute a simple and effective enrichment.

Aqua Alexandrina (Figs. E 1 and E 2).—In strong contrast to the aqueduct just described is the remnant of the last of Rome's imperial aqueducts, which was built by Severus Alexander 226 A.D.,¹ to furnish water for his baths.² About six hundred arches of this aqueduct are to be seen in detached groups between Rome and its source about twenty-two kilometres distant, not far from the Lake of Gabii. The section which we shall take for comparison with the aqueducts already studied comprises some fifty arches, traversing the valley of Maranella between the Via Labicana and the Via Tuscolana, where those roads are connected by the Strada Militare. It is the first arcuated section outside the walls. Though much hidden by the restorations of later times, there is enough of the original structure unconcealed to give a correct idea of its original condition.

We shall examine it more by way of comparison than with a view to carrying further our study of the architectural aspects of the Roman aqueducts. It illustrates, however, as well as any monument of its date, the beginnings of decline in architecture in general, and this not only in its construction and in the materials of which it is made, but even more in its conception and in the lack of artistic feeling manifested in its design.

Materials.—The Alexandrina is constructed throughout of brick; the core, with a large proportion of mortar that has yielded in great measure to the influence of the elements, wherever exposed. The one refinement of construction here exhibited is the introduction of bonding courses of large well-made tile at intervals of 1.20 m. These have outweathered all the rest of the materials. The bricks which form the outer shell are not nearly so hard as those used in Nero's arches. The joints are nearly three-quarters as thick as the bricks themselves. With the decay of the mortar the weather has naturally made havoc with the revetment, and it has disappeared from almost all portions of the aqueduct.

Design.—The proportion of void to solid is also changed by a diminution of the voids; for the ratio is more than half to

¹ Cohen, 4, 47, 233.

² *Ibid.* and Lampridius, *Alex. Sev.* 25, 3.

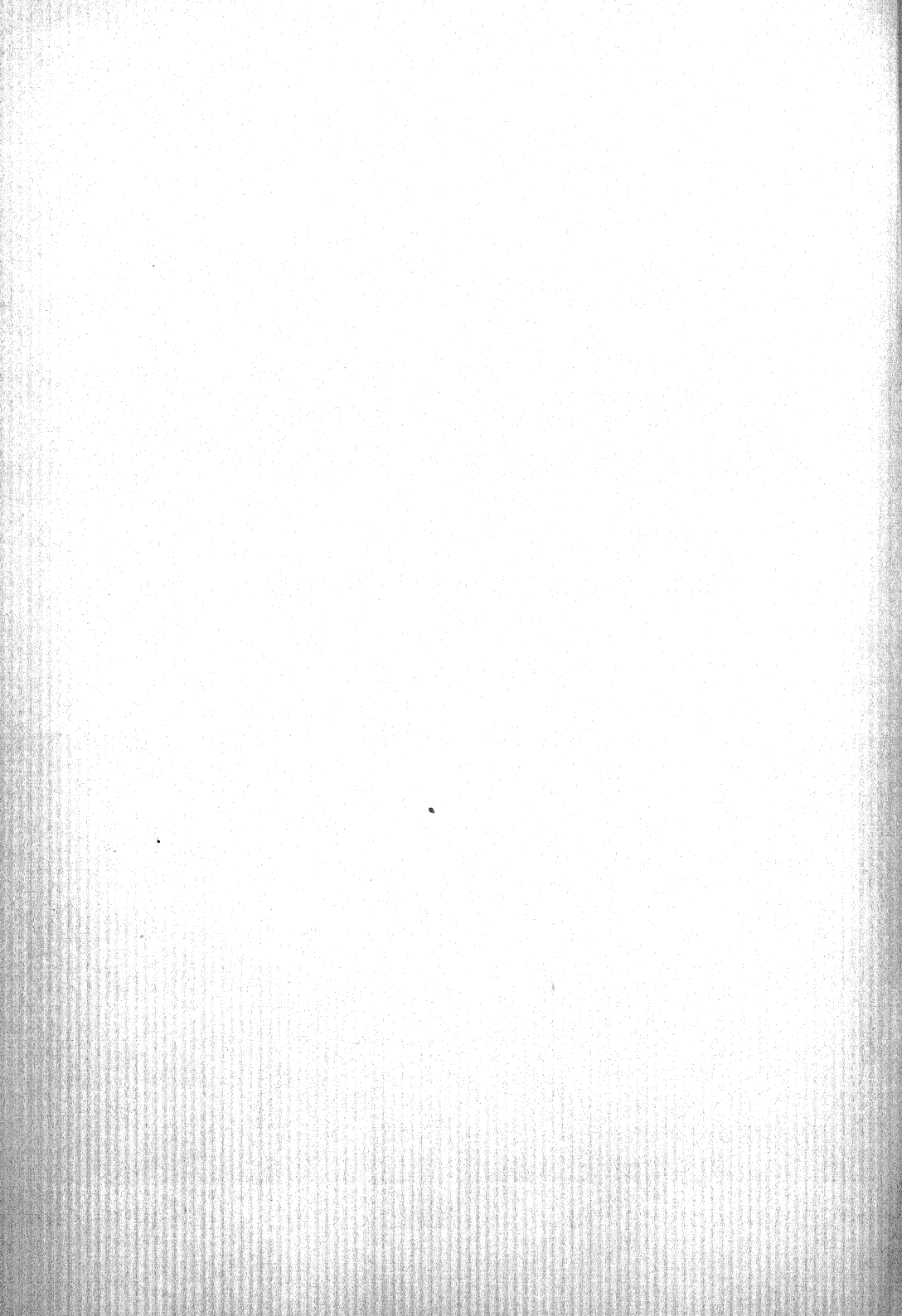
half in favor of the solids. The piers are square in plan, measuring 2.35 m. on a side. In some sections of the aqueduct the piers reach the height of sixteen or seventeen metres, but in this portion the highest are not over seven or eight. The span of the arches here is a trifle over 3 m., though in other places it is as wide as 3.50 m. The arches consist of two concentric rows of bricks, not wedge-shaped but made to conform to the curve by the use of more or less mortar. The soffits and archivolts are flush with the faces of the piers, as in the Neroniana, but the extrados of the consecutive arches are not tangent by some 0.56 m. The uppermost course of the piers, the impost of the arches, consists of three projecting layers of tiles, as in the Neronian aqueduct. I have found no trace of a moulding at the *specus* line, and imagine that the surface of the wall above the arches was unbroken. The *specus* is totally destroyed at this point, but I have found its measurements in the Villa di Casa Rossa to be 0.72 m. in width, by 1.33 m. to the spring of the vaulted covering. The wall of the *specus* is 0.80 m. in thickness. No minute comparison is required to demonstrate the inferiority of the Alexandrine aqueduct as an architectural monument, yet it possesses certain architectural elements, besides those features which are purely structural. This is no less an aqueduct than the others which we have reviewed, and served every purpose that was required of it. What then does it lack, unless it be the application of those principles of art which raise structures above the plane of purely scientific works, to the level of architectural productions?

In a general survey of the broad field of Roman architecture, we find palaces in which a far more elaborate scheme of design is carried out, triumphal arches much more ornate and more labored in composition, and temples upon which richer and more costly materials were lavished; but we see no structures upon which the true spirit of Roman strength is more clearly imprinted, none in which the Roman love for symmetry and precision is more fully demonstrated, than in the clear-cut lines

of the Marcian aqueduct, a monument that has defied all disintegrating influences, except earthquake and the wanton destruction of men's hands, for over two thousand years. We see no structure more stupendous or more majestic than the towering arches of the Claudia, rising among the ruins of the purple-shadowed plain. This must have been felt by every architectural enthusiast who has stood at evening upon the Campagna where "the shattered aqueducts, pier beyond pier, melt into the darkness like shadowy and countless troops of funeral mourners passing from a nation's grave."

HOWARD CROSBY BUTLER.

ROME, June, 1897.



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HAROLD N. FOWLER, *Editor*

* * Books, pamphlets, and other matter for the Bibliography should be addressed to Professor FOWLER, 49, Cornell Street, Cleveland, Ohio.

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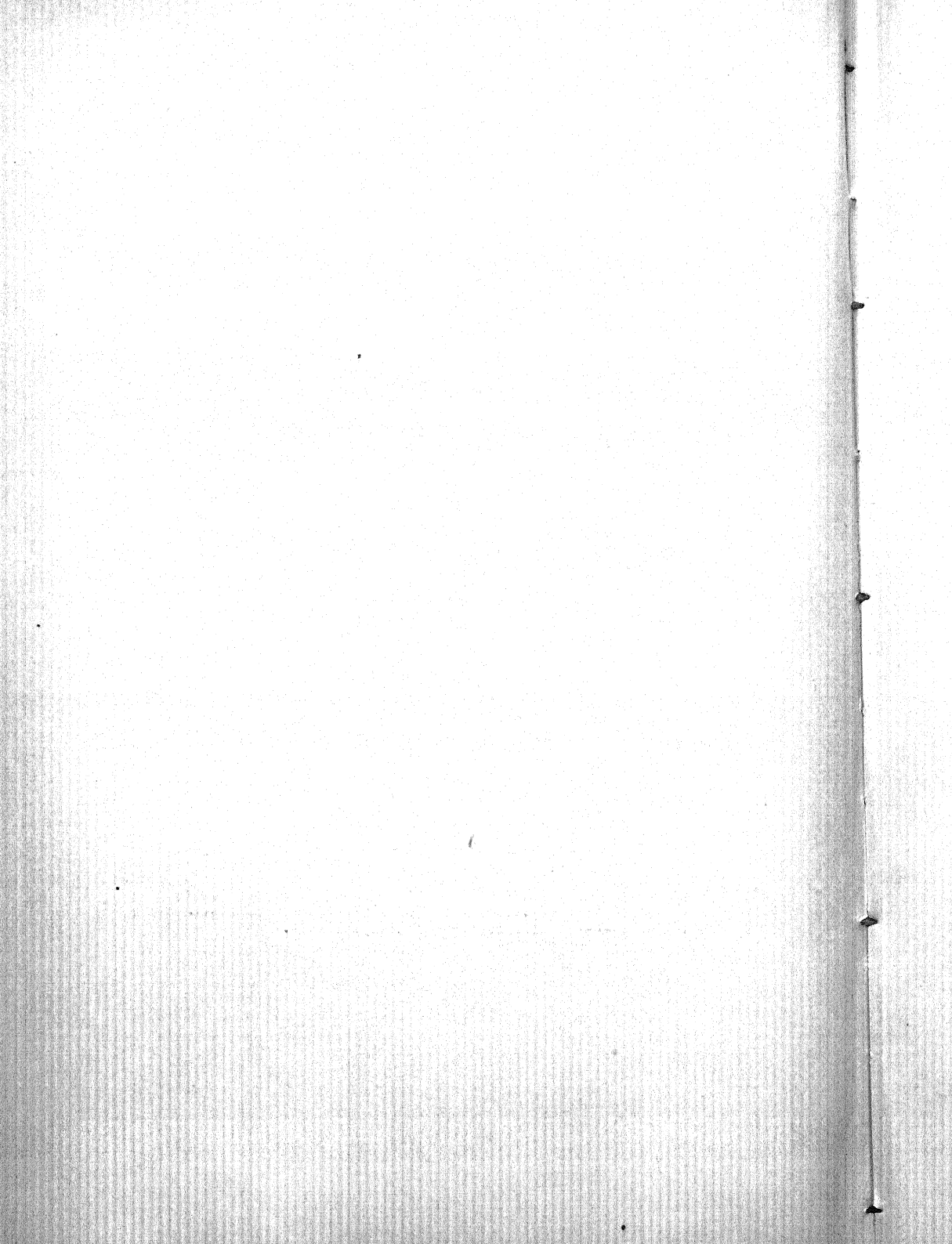
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- **P. Seidel**, Französische Kunstwerke des XVIII Jahrhunderts im Besitze Sr. Maj. des deutschen Kaisers und Königs von Preussen. Leipzig, 1900. x, 220 pp.; 90 illustrations. Folio.
- **R. A. M. Stevenson**, Velasquez. London, 1899. 176 pp. 8vo.
- **H. Strachey**, Raphael. New York, 1900, The Macmillan Co. xi, 147 pp. 8vo. \$1.75.
- **S. A. Strong**, Reproductions in Facsimile of Drawings by the Old Masters in the Collection of the Earl of Pembroke and Montgomery at Wilton House. London, 1900, P. & D. Colnaghi & Co. 66 pls. Folio. \$31.50.
- **W. Suida**, Die Genredarstellungen Albrecht Dürers. Strassburg, 1900, Heitz. 124 pp. 8vo.
- **I. B. Supino**, Sandro Botticelli. Florence, 1899, B. Seeber. 150 pp.; 75 illustrations. 8vo. \$2.40.
- Botticelli. Traduction de M. de Crozals. Florence, 1900, Alinari. 169 pp.; 72 illustrations. 8vo.
- E. Tonnies**, Leben u. Werke des Würzburger Bildschnitzers Tilmann Riemenschneider, 1468-1531. Strassburg, 1900, Heitz. iv, 292 pp. 8vo. \$2.50.
- I. de Varaville**, Histoire du château de Vincennes, des origines à nos jours. Paris, 1900, Lib. d'éduc. nat. 320 pp.; 75 cuts. 8vo.
- **Vasari**, Lives of the Painters, Sculptors, and Architects. Translated by A. B. Hinds, with numerous illustrations. In 8 vols. Vols. I and II. New York, 1900, The Macmillan Co. 16mo. \$0.50 each.
- **Leonardo da Vinci**, Il Codice Atlantico nella Biblioteca Ambrosiana di Milano. Fasc. XVII-XX. Milan, 1900; pp. 689-860; pls. 641-800. Folio.
- **K. Voll**, Die Werke Jan van Eyck. Eine Kritische Studie. Strassburg, 1900, Trübner. xv, 136 pp. 8vo. \$0.75.
- P. Weber**, Beiträge zu Dürer's Weltanschauung. Eine Studie über die drei Stiche, "Ritter, Tod, und Teufel," "Melancholie," und "Hieronymus im Gehäus." Strassburg, 1900, Heitz. v, 110 pp.; 4 pls.; 7 figs. 8vo. \$1.25.
- **George C. Williamson**, Pietro Vannucci, called Perugino. [*Great Masters in Painting and Sculpture*.] London, Bell. xv, 160 pp.; illustrated. 5 sh.
- M. Zucker**, Albrecht Dürer. Halle, 1900, Niemeyer.



ARCHAEOLOGICAL DISCUSSIONS

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN RECENT PERIODICALS¹

GENERAL AND MISCELLANEOUS

Antiquities of Bosnia-Herzegovina and Dalmatia. — *Rambles and Studies in Bosnia-Herzegovina and Dalmatia*, by Robert Munro (Second edition. Edinburgh and London, 1900, William Blackwood and Sons, xxv, 452 pp.; 40 pls.; 165 figs. 8vo. 12s. 6d.) not only describes the author's travels in the countries mentioned and the ancient remains which he saw when he attended the congress of anthropologists and archaeologists at Sarajevo in 1894, but contains much archaeological discussion. The treatment of the Bogomiles has been added to in the new edition in reply to criticism. The book is further enlarged by the addition of chapters on the Hallstatt and the La Tène civilizations and an index.

Early Metallurgy. — In *Archaeologia*, LVI, 2, 1899, pp. 267-322 (27 figs.), W. Gowland describes the various primitive processes employed in Europe for extracting copper, tin, and iron from their ores. The paper, entitled 'The Early Metallurgy of Copper, Tin, and Iron, in Europe, as Illustrated by Ancient Remains, and the Primitive Processes surviving in Japan,' was read before the Society of Antiquaries, May 18, 1899.

The Representation of the Gallop in Art. — In *R. Arch.* XXXVII, 1900, pp. 244-259 (31 figs.), S. Reinach continues his discussion of the representation of the gallop (see *Am. J. Arch.* 1900, p. 521). The *galop volant*, with the legs of the horse stretched out nearly horizontally before and behind, is Mycenaean and is absent from classical and renaissance art. It is found in engraved gems called by Furtwängler Graeco-Persian. These were probably engraved somewhere on the shore of the Black Sea. Mycenaean traditions lived on in this region, and were propagated by trade toward northern Europe. In Armenia and neighboring regions these tradi-

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor FOWLER, Editor-in-charge, assisted by Miss MARY H. BUCKINGHAM, Professor HARRY E. BURTON, Professor JAMES C. EGBERT, JR., Professor ELMER T. MERRILL, Mr. GEORGE N. OLCOTT, Professor JAMES M. PATON, and the Editors, especially Professor MARQUAND.

No attempt is made to include in the present number of the JOURNAL material published after December 31, 1900.

For an explanation of the abbreviations, see pp. 123, 124.

tions survived, and their influence appears in Persian art under the Sassanide kings and later.

Ancient Places and Names of Places.—In *R. Arch.* XXXVI, 1900, pp. 345-391 (map) Victor Bérard shows that the Homeric Pylos was in Triphylia, at Samikon. Pherae was at Aliphera on the Alpheus. The name Samos (and Samikon) is Semitic, and means *height*. Other Semitic names in this part of Greece are discussed, and history, legend, and genealogy are used in support of the identifications proposed. *Ibid.* XXXVII, 1900, pp. 15-124, Homeric geography as shown in the wanderings of Odysseus is discussed. Its sources are Phoenician. Many names are transliterations (e.g. Megara = Semitic me'ara) or translations of Semitic words. The importance of Megara and the trade between Megara and Thebes in early times is discussed. Calypso's isle is identified with Perejil, an island off the African coast not far from Gibraltar. The Semitic name *Ispania* means hidden island, in Greek *Καλυψοῦς νῆσος*. This island gave its name to the opposite mainland, whence the Romans called Spain *Hispania*. Topographical details of the region near the Strait of Gibraltar are discussed. Various examples of Semitic names of places are given. So *Alaiḡ* means hawk island, *νῆσος Κίρκης*. *Ibid.* pp. 262-299, the importance of Phoenician influence in the Aegean is further developed. The island of Syria (Odyssey, xv, 405 ff.) is shown to be Syra and its importance is discussed. Numerous instances of Semitic names and Greek translations of Semitic names along the coast of Asia Minor and the neighborhood are collected.

A Bronze Wheeled Base from Cyprus.—In *Sitzb. Mün. Akad.* 1899, ii, pp. 411-433 (2 figs.), A. Furtwängler publishes a square support for a caldron, found near Larnaka and now in the possession of Mr. M. Caremfilaki at Larnaka. It is of bronze, supported on four wheels, and adorned with sphinxes and spiral patterns. A similar utensil from Enkomi, Cyprus, is in the British Museum (fig.). This is differently adorned, having a resemblance to a house with two women looking from a window. These bases explain the description of the bases in Solomon's temple, 1 Kings vii. 27-37. They belong to the later part of the Mycenaean age, about the time of Solomon. They show some signs of Syrian influence, but the chief influence was from the Mycenaean civilization to Syria, not from Syria west. The occurrence of similar objects in Greece, Italy, and northern Europe shows, not that these regions were influenced by the east, but that the early art of Europe spread to the east.

Egyptian Porcelain from Samos.—In *Jh. Oesterr. Arch.* I. III, 1900, pp. 210-213 (1 pl.; 1 fig.), J. Boehlau discusses a vase of so-called Egyptian porcelain found in a grave of the sixth century B.C. in Samos. The vase has the form of the dwarfed Bes. The view is taken that this ware is Phoenician and cannot be referred to Naucratis. A terra-cotta group of a god and goddess from the same grave is also figured. Both vase and terra-cotta were lost, but they are now in the Museum in Vienna.

The Influence of the Aegean Civilization on South Palestine.—In the October *Quarterly Statement* of the Pal. Ex. Fund, B. F. Welch points out that, in and before the "Mycenaean" civilization, the influence was from the Aegean eastward, but that with the beginning of the Iron Age "the current was reversed, and the decadent Mycenaean art gave way to the young Phoenician civilization." The history of pottery in Palestine has

been well established by recent excavations. The article is reprinted in the *Annual of the British School at Athens*, VI, 1899-1900, pp. 117-124.

The Chaldaean Bull with Human Head.—In *Mon. Mém. Acad. Insc.* VI, pp. 115-132 (pl. xi; 8 figs.), Léon Heuzey publishes a bronze statuette in the Louvre. It is a fine Babylonian work, representing a recumbent bull with bearded human head surmounted by a low cap and curved horns. A hole in the back shows that it was a pedestal, probably for a figure of a god. The influence of this type upon Phoenician art is discussed. It is also seen in Greek art, notably in the figure of Achelous, and in the early art of Spain. The influence of the Phoenicians on early Spanish art is emphasized.

The Pontic Colonies.—At the July meeting of the Berlin Arch. Gesellschaft, Mr. von Stern, of Odessa, spoke on the history of the Greek colonies on the Black Sea as inferred from the finds of pottery. Their trade relations were chiefly with Athens during the sixth century and from the time of Alcibiades into the third; Ionian and Alexandrian connections also appear; and from the middle of the second century B.C. Italian influence prevailed. There is similar evidence of Aegean influence in the inland region along the Dnieper, from a very early period. (*Arch. Anz.* 1900, 3, pp. 151-153.)

Roman Officials in Egypt.—In *Jh. Oesterr. Arch.* I. III, 1900, Beiblatt, pp. 209-212, Arthur Stein makes some additions to the Prefects in Egypt, a short list of whom is published in Paul M. Meyer's book *Das Heerwesen der Ptolemäer und Römer in Aegypten*. In *Jh. Oesterr. Arch.* I. III, 1900, Beiblatt, pp. 221-224, "Nachträge" are published by Arthur Stein and O. Benndorf. The former adds a note to *Jahreshefte*, II, Beiblatt, 107, pointing out that the Volusius Maecianus mentioned in n. 35 of the Genevan publication of papyri is not the same Maecianus who supported the revolt of Avidius Cassius in Egypt. Benndorf prints an explanation from Friedrich Hauser in regard to remarks in *Jahreshefte*, II, 257, 5. He further commends in the main the article of v. Wilamowitz-Möllendorf, *Hermes*, XXXIII, 209 ff., on the Ephesian topographical inscription, *Jahreshefte*, II, Beiblatt, 15 ff.

A Roman Inscription in Spain.—In the *Revue des Études Anciennes*, II, 1900, pp. 237-244, E. Hübner shows that the inscription *C.I.L.* VI, v, 1885, No. 3050*, is not false, but was until recently at Plasencia, in the house of the Marquis of Mirabel. It has now disappeared, but probably still exists. The text is discussed from a copy by Philippe Léon Guerra.

Roman Remains in Servia.—In *Jh. Oesterr. Arch.* I. III, 1900, Beiblatt, pp. 105-178 (69 figs.), A. von Premenstein and N. Vulić discuss ancient remains in Servia. These consist of inscriptions, chiefly sepulchral and dedicatory, many of which have already been somewhat imperfectly published in *C.I.L.* The topographical order of *C.I.L.* is followed. Considerable information concerning military matters may be gathered especially from the Dalmatian inscriptions, p. 151, and in general this is the chief value of a large number of the inscriptions.

EGYPT

Some Predynastic and Early Dynastic Antiquities from Egypt.—In *Archaeologia*, LVI, 2, 1899, pp. 337-350 (9 figs.), is a series of notes by

F. G. Hilton Price on Egyptian antiquities in his collection. The notes are for the most part devoted to showing the purposes for which various utensils found in the early tombs at Abydos and elsewhere were intended.

Fortifications in Ancient Egypt.—In the *J. Asiat.* 1900, pp. 80-142 (14 figs.), 201-253 (6 figs.), Raymond Weill discusses ancient Egyptian fortifications. After general observations on the character of Egyptian fortifications, their chronology, and the existing ruins and paintings from which information may be derived, the individual remains of fortifications are treated in detail, their plans are established and their dates fixed. The articles contain many remarks on ancient warfare and on the progress of the Egyptian empire at various times.

Foreign Relations of Early Egypt.—The *Independent*, January 17, 1901, gives a summary of an article by J. Naue in the *Beilage* of the Munich *Allgemeine Zeitung*, in which special attention is called to the evidence of early trade relations between Egypt and the countries to the south and west, but especially with Europe and Crete. The evidence consists of vases found at Naguada, adorned with patterns identical with those found in other places, and of other vases with representations of galleys. Mr. Evans's discoveries at Cnossus have shown that the relations of Egypt with Crete were exceptionally close at an early date. In general, intercourse between nations 2000, or even 3000 years B.C., was closer than has been supposed.

The Goddess Maut.—In the *Revue des Études Anciennes*, II, 1900, pp. 245-248, George Foucart discusses the nature of the Theban goddess Maut, a colorless deity who became a mere manifestation of Hathor, as did also, in some measure, Sokhit and Bastit.

ASIA

A Dedication to Zeus Heliopolites.—In *C. R. Acad. Insc.* 1900, pp. 152-156, Ch. Clermont-Ganneau restores the inscription published by Waddington, *Insc. Gr. et Lat. de la Syrie*, No. 2556, as follows:

[Δὺ Μεγίστ](ψ 'Ηλιο)πολί[τ]η, Γάιο[ς? Τ]
[αιμο]θέου, <ε>(ιε)ρεὺς(ς)· ἐγένετ[ο τό]
[δ]ε διὰ ἐπιμελητῶν Ἀβιδβήλου
[Μη]δέου καὶ Ζήνων[ος] Ἰδελάμο
υ] ἐκ τὰ τοῦ θεοῦ καὶ τῆς κώμης.

The readings are supported by a commentary.

An Inscription supposed to be of Antiochia.—In *R. Ét. Gr.* XII, 1900, pp. 258-280, Maurice Holleaux reprints the text of the inscription from Pergamon, No. 160 in the collection of Fränkel, Fabricius, and Schuchhardt, and comments upon its contents. The inscription decrees honors to King Eumenes, the son of Attalus, his parents and brothers, on account of assistance rendered to King Antiochus IV. It has been supposed that the decree emanated from the Antiochians, but the order in which the festivals in the city passing the decree, at Pergamon, and at Daphne, just outside of Antiochia, are mentioned, makes this improbable. The opening formula is that used in Athens at the time of the inscription, and other peculiarities of speech point to Athens. Antiochus had been at Athens, and his relations with no other city were so friendly as with her. Probably the inscription is the record of an Athenian decree.

The Necropolis of Termessus.—In *Jh. Oesterr. Arch. I.* III, 1900, pp. 177-210 (39 cuts), R. Heberdey and W. Wilberg publish an extensive and valuable architectural and epigraphical study of the tombs of the northern necropolis at Termessus, in Pisidia. The work is really in continuation of that published by Niemann and Petersen in Count Lanckoronski's *Städte Pamphiliens und Pisidiens*. For the inscriptions, see also *B.C.H.* XXIII, 165 ff. and 280 ff.

Reliefs from Tralles.—In *Röm. Mith.* 1900, pp. 99-107 (3 figs.), E. C. Lovatelli describes two reliefs found at Tralles, and now in the Imperial Ottoman Museum at Constantinople. They are almost identical. Each represents a gladiator, a *secutor*, and on each stone is a Greek epigram. The writer discusses certain mysterious marks that are cut on the stones.

The Lions of Cybele.—In *J.H.S.* XX, 1900, pp. 118-127, J. W. Crowfoot, discussing the symbolic character of Phrygian gravestone devices, traces the common motive of a bull between two lions, back through the legend of the slaying of Dionysus by the Corybantes and the earlier hero cult, to the time of human sacrifice and cannibalism. The Greek version of the relation of the Great Mother to her children, the lions, is typified in a passage of the *Philoctetes* and in the statue of the goddess with lions around the base of her throne.

The Telephus Frieze from Pergamon.—In *Jb. Arch. I.* XV, 1900, pp. 97-135 (pl.; 18 figs.), H. Schrader discusses the sequence and restoration of the Telephus frieze of the great altar at Pergamon, and suggests certain additions to the accepted reconstruction of the building, based on further study of the remains. He continues the line of columns which surmount the great frieze on the outside around the flanking walls of the stairway and across the head of the steps, and places the small frieze on the upper part of the entire inner side of the wall, out to the ends of the flanking walls.

Antiochus Epiphanes.—Antiochus IV, known to the Greeks for his great devotion and liberality toward the Hellenic gods, is said in the Book of Daniel to "magnify himself above every god" and to "regard not any god." The explanation is found in his titles *ἐπιφανής* (*praesens divus*) and *νικηφόρος*, and in his representation on coins as holding Nike in his hand, as did his ancestor Seleucus I Nicator. He identified himself with Zeus Olympius and established his own worship in Jerusalem, as in any other Hellenized city. (E. R. BEVAN, *J.H.S.* XX, 1900, pp. 26-30.)

The Asian Calendar.—In *Athen. Mith.* XXV, 1900, pp. 111-112, J. G. C. Anderson publishes 'The Apameian *Exemplum* of the Asian Calendar Inscription,' in correction of the inaccurate copy of Bérard.

GREECE ARCHITECTURE

Was the Homeric House Mycenaean?—In *J.H.S.* XX, 1900, J. L. Myres, discussing the plan of the Homeric house, decides that the Mycenaean palace, with single-doored megaron and a separate house for the women across the court-yard, satisfies the references much better than the Hellenic house, with gynaeceum leading from the rear of the andrōn. The latter, however, may have been the permanent native Aegean type, temporarily

displaced under the foreign "Mycenaean" lords. Among the points discussed are οὐδός, κατά and ἀνά (in and out), διέκ, ὀρθοθύρη, λαύρη, κτέ. (Pp. 128-150; 6 cuts.)

The Homeric Thalamos.—In *Jh. Oesterr. Arch. I.* III, 1900, pp. 137-142. Rudolf Münsterberg discusses the nature of the Homeric thalamos. It was not the regular armory of the house. Arms were ordinarily kept in the megaron. The thalamos was rather a storeroom and a place where valuables were kept. It is further to be distinguished from that thalamos which was the special chamber of the lord and lady of the house. This latter is often to be thought of as a structure separate from the main building. The *μυχός δόμου* is a primitive thalamos, and from this is developed the opisthodomos of the later temple.

Plans of Athenian Buildings.—Supplementary paper No. 3, of the Society for the Promotion of Hellenic Studies, is a series of plans and drawings of Athenian buildings, with explanatory text, revised and arranged from Professor Middleton's notebooks by Professor E. A. Gardner with the assistance of Mr. T. D. Atkinson. Nos. I-XIII give the Acropolis and buildings upon it; XIV-XXII, the Erechtheum; XXIII-XXXV, other Athenian buildings. (x, 24 pp.; 25 pls.)

SCULPTURE

New Monuments of Ancient Art.—In *Sitzb. Mün. Akad.* 1899, ii, pp. 559-607 (10 figs.; 2 pls.), A. Furtwängler publishes and discusses several hitherto almost unknown small monuments. 1. *Mycenaean Bronze Statuette from Asia Minor.* The statuette is broken and reduced to a bust 0.065 m. high. Time has made the face indistinct. The hair is gathered in a sort of knot over the forehead, then twisted about the head, and the ends fall over the nude breast and shoulders. The arms are broken off, but part of the left hand remains on the forehead. This figure, found near Smyrna, was, like a similar one in Berlin, from the Troad, a mourner. Both are works of "Mycenaean" art. The freedom of movement, ease of rendering of the hair, and fulness and softness of form are remarkable and quite different from primitive bronzes of the following epoch. Other works are cited in comparison. 2. *Bronze Statuettes from Arcadia.* The first of these, from Lusoi, now in private possession in Paris, is a nude Apollo holding a bow in the left hand. The missing right hand probably held an arrow or laurel branch. On the back is inscribed: τὰς Ἀρτάμιος ἀποβύμων τὰς Ἡμέρας. The work belongs to about 480 B.C. or slightly earlier, and shows the Argive style of the period. The second, also from Lusoi and now in Paris, represents a draped female. The heavy hair is cut off straight across the forehead and round the neck. The weight is supported equally on both feet, the drapery hangs straight down, and the forearms are extended parallel to each other. The general effect is square and solid. The head is large and heavy. A heavy garment without folds hangs upon the shoulders. The third bronze, from Mazi, near Olympia, now in the Museum of Fine Arts in Boston (cf. *Am. J. Arch.* 1899, p. 569), is dedicated to Artemis Δαίδαλει. The fourth, probably from Lusoi, is now in Berlin. Artemis is represented with a torch in her right hand and a large poppy stalk in her left. As in the two previous figures, the weight rests equally on both feet. The drapery is heavy, arranged like that of the standing females of the pediments at

Olympia. The proportions are very heavy. The fifth figure, probably from Lusoï, now disappeared, is similar, but less heavy. The hands hold no attributes. The heavy type of the head resembles that of the Hybrisstas from Epidaurus. These early Peloponnesian figures show the style from which that of the Argive school of the fifth century developed. Coins of Heraea and other works are cited in comparison. 3. *Athena Statuette in Naples, an Argive Prototype of the Athena Lemnia*. Athena is represented with no attribute save an owl on her left hand. The raised right hand rested on a spear. The hair is arranged somewhat as in the Athena Lemnia as reconstructed by Furtwängler. The importance of these early Peloponnesian figures is emphasized. 4. *Aphrodite Pandemus as a Goddess of Light*. Usener (*Götternamen*, pp. 64 f.) derives Πάνδημος from the root *djer*, "light." A painted terra-cotta plaque with relief, from Thebes (sold at auction at Helbing's, Munich, October, 1897, No. 112), represents a half-draped Aphrodite riding a goat. On the white background are fourteen stars and two kids. The date is evidently about 400 B.C. Other indications of the worship of Aphrodite Pandemus as a goddess of light are cited and discussed.

An Archaic Apollo.—A marble head from the Tyszkiewicz collection (Frœhner, *Collection d'antiquités du comte Michel Tyszkiewicz*, p. 96, No. 308, pl. xxxi), now in the Somzée collection in Brussels, represents a youth, probably Apollo. There are some peculiarities in the arrangement of the hair, and the fact that the lips are slightly opened in smiling shows that the head belongs to the late archaic period, the first half of the fifth century B.C. It is probably a work of the Ionic school. (HENRI LECHAT, *R. Arch.* XXXVII, 1900, pp. 1-6; 2 pls.)

Archaic Terra-Cotta Head.—In *Mon. Mém. Acad. Insc.* VI, pp. 133-143 (pl. xii; 4 figs.). E. Pottier publishes an archaic terra-cotta head 0.18 m. high, found in Boeotia, and now in the Louvre. Some fragments of wings show that it belonged to a sphinx. The hair falls in a heavy mass behind. The head wears a diadem adorned with lotus flowers. The type shows Ionian influence, and the date is early in the fifth century B.C. The clay is Corinthian, a fact which shows that Corinth was at that time a centre, perhaps the chief centre, of the industry of terra-cotta making. The nude parts are covered with a colorless glaze, the effect of which, alongside of the parts colored with dull red and black, was probably analogous to that of the γάνωσις of marble statuary by means of wax.

The Pediments from Aegina in Munich.—The *Berl. Phil. W.* December 8, 1900, quotes from Furtwängler's new *Beschreibung der Glyptothek König Ludwigs I* the statement that the composition of the pediment groups from Aegina is far from being known. There were more figures than have been assumed, and some of these were more nearly in front face than in profile. The composition was much livelier and better than has been supposed. In *Berl. Phil. W.* December 15, 1900, B(elger) calls attention to the need of further excavations at the temple at Aegina, that all existing fragments of the sculptures as well as the stones upon which they stood may be found.

The Delphic Charioteer and Pythagoras of Rhegium.—In *Jh. Oesterr. Arch.* I. III, 1900, pp. 142-145 (2 figs.), Arthur Mahler compares the head of the Delphian Charioteer with that of the head of Athena at Brescia (FURTWÄNGLER, *Meisterwerke*, 123, fig. 23). He suggests that these works may be assigned to Pythagoras of Rhegium.

Myron's Ladas.—In *Sitzb. Sächs. Ges.* 1900, pp. 329–350, F. Studniczka discusses the literary sources of knowledge of the statue of Ladas. The artist was the great Myron of the fifth century, not the later Myron. The epigram *Anth. Pal.* XVI, 53, ed. Dübner, read originally:

Λάδας τὸ στάδιον εἴθ' ἤλατο, εἶτε διέπτη
οὐδὲ φράσαι δυνατόν· δαιμόνιον τὸ τάχος.
Ὁ ψόφος ἦν ὑσπληγος ἐν οἶασιν καὶ στεφανοῦτο
Λάδας, οἱ δ' ἄλλοι δάκτυλον οὐ πρόεβαν.

There was only one statue of Ladas, and that was at Argos. Ladas was an Argive. His death was not immediately after a race, but took place on his way home. The second epigram (*Anth. Pal.* XVI, 54) consists of eight lines, not to be separated. The first two lines read:

Οἷος ἔης φεύγων τὸν ὑπήμενον, ἔμπνοε Λάδα,
θυνόν, ἐπ' ἀκροτάτῳ σκάμματι θεῖς ὄνυχα.

Θυνός is equivalent to δρόμος. Σκάμμα is the loosened earth desirable for athletic contests. Ladas was represented running at the moment when his weight rested on the forward foot. His arms were doubtless bent and close to his sides.

The Nointel Drawings not by Carrey.—In *C. R. Acad. Insc.* 1900, pp. 262–264, E. Babelon calls attention to the fact that Albert Vandal in his book *L'Odyssée d'un ambassadeur, les voyages du marquis de Nointel*, 1670–1680 (Paris, 1900, Plon, 8vo.), shows that the drawings of the Parthenon made for the Marquis de Nointel are the work of an unknown Flemish painter, not of Jacques Carrey, who met the marquis for the first time in 1675, two years after the drawings were made. Before Vandal, Omont had declared that the drawings are not by Carrey.

The Parthenon Frieze.—In regard to W. Passow's restoration of certain figures in the Parthenon frieze (*Jb. Arch. I.* XV, 1900, pp. 42–49), Dr. Murray notes that the youth there supposed to be arranging his head band, has a petasus hanging behind his shoulders, and the boy restored as pulling in reins (north frieze, XLII) has his two hands clasped together. (*Arch. Anz.* 1900, p. 117.)

Two Greek Originals in Copenhagen.—In *Sitzb. Mün. Akad.* 1899, ii, pp. 279–296 (2 figs.), A. Furtwängler interprets two statues in the Ny Carlsberg Museum at Copenhagen (Arndt's publication, pls. 38–40 and 51–52), as parts of a pediment group representing the fate of the children of Niobe, shows that the group belonged to the fifth century B.C., assigns it to the western pediment of the "Theseum" at Athens, and argues that the temple was that of Apollo Patrous. The decorative sculpture of the temple was the work of one man, perhaps Cresilas. The Myronian Apollo, best known by the copy at Cassel, may have been the statue in the temple. In that case it would not be unnatural for Cresilas to do the decorative sculpture.

A Bronze Statuette at Belgrade.—In *Jh. Oesterr. Arch. I.* III, 1900, pp. 172–177 (3 figs.), Miloje M. Vassits publishes a bronze statuette, probably of the fifth century B.C., which is in the Museum at Belgrade. This represents a man in the position of dismounting from a horse. Similar representations are collected from sculpture, vases, coins, etc.

A Relief from the Sanctuary of the Amarusian Artemis.—In *Ἐφ. Ἀρχ.* 1900, pp. 6–26, pl. ii, K. Kourouniotes publishes a relief from the sanctuary

at Eretria, which he now believes to be that of Artemis Amarusia. Three draped deities are represented, Apollo with his lyre, Leto and Artemis with a torch. A worshipper, of small size, completes the group. Comparison with the reliefs from Mantinea, coins of Megara, and other monuments leads to the conclusion that the relief reproduces temple statues, which may have been works of Praxiteles in his youth. Two reliefs from Larisa (National Museum at Athens, No. 1400 and No. 1380 = HARTWIG, *Bendis*, p. 9, fig. 2), are published representing the same deities in similar grouping, but not after the same originals. In the same Eretrian sanctuary, a large marble *omphalos* (fig.), a lead weight with the inscription Ἀρτέμιδος and a monogram ΕΥΘΚ on one side, and on the other a pattern of four radiating leaves and a lozenge-like figure (2 cuts) were found. (Cf. p. 97.)

Head of a Youth from the Acropolis of Athens.— In Ἐφ. Ἀρχ. 1900, pp. 1-6, pl. i, W. Klein publishes a marble head from the Acropolis numbered 1331 (Καστριώτης, *Κατάλογος τοῦ μουσείου τῆς Ἀκροπόλεως*, p. 60). It is a better replica, perhaps the original, of the head in Berlin, *Antike Sculpturen*, No. 329 (KLEIN, *Praxitelische Studien*, fig. 14). The artist is probably Leochares, and the work may be a portrait of Alexander the Great.

Head of Aphrodite.— In Ἐφ. Ἀρχ. 1900, pp. 87-90 (pl. v.), P. Kastriotis publishes a head of Aphrodite, of more than life size, found in 1889-90, near the Tower of the Winds, in Athens, now in the National Museum, No. 1762. It resembles a head found in 1823 at Arles, and is an imitation of the Cnidian Aphrodite of Praxiteles, to be dated, therefore, after 350 B.C. The nose is broken and the face otherwise somewhat marred. A cross is roughly cut in the forehead, indicating that the head was used in Christian times as the head of a saint, perhaps the Virgin Mary.

The Agias of Lysippus.— In the *Revue des Études Anciennes*, II, 1900, pp. 195-203, Henri Lechat gives the evidence for connecting the statue found at Delphi with Lysippus. (See *Am. J. Arch.* 1900, p. 527.) He describes the remains of the group to which the statue belongs. The bronze (?) original was probably at Pharsalus, the marble statues at Delphi being copies made at about the same time.

A Portrait Head by Leochares.— In *Jh. Oesterr. Arch.* I. III, 1900, Beiblatt, pp. 219-222, Otto Benndorf discusses very briefly the head found on the Acropolis, and published by W. Klein in Ἐφ. Ἀρχ. 1900, πιν. I. Klein rejects the view that the head is a portrait of Alexander, while holding that it is a portrait by Leochares, and he considers a similar, though much injured, head in Berlin to be a copy of the one in Athens. Benndorf now brings into the discussion another similar and well-preserved head in the Erbach collection, from Hadrian's Villa in Tivoli. (See STARK, "Zwei Alexanderköpfe," *Festschrift der Univ. Heidelberg zur Feier des 50 jähr. Stiftungsfestes des deutschen Arch. Instituts in Rom*, 1879.) He further points out that the head with the wreath now in Constantinople, which Wiegand has discussed in *Jh. Arch.* I. XIV, 1 ff., and which he shows to be an Attic portrait of Alexander, bears in many ways a strong resemblance to the Acropolis head. Klein, Wiegand, and Stark all thought of Leochares in discussing the several heads. These facts are advanced by way of suggestion.

The Apollo Stroganoff and the Apollo of the Belvedere.— In *Athen. Mitth.* XXV, 1900, pp. 280-286, A. Furtwängler replies to the arguments

by which Kieseritzky defended the genuineness of the Apollo Stroganoff. The bronze belongs to a class of forgeries which are copies, more or less close, of larger statues, cast hollow, and with the flaws in casting repaired in such a way as to suggest damage in antiquity. Examples are cited. Kieseritzky fails to show that an ancient patina once existed in place of the present modern patina. The support under the left foot is found, as Kieseritzky says, in some bronzes, but is very rare indeed, and the examples are chiefly Roman bronzes of somewhat poor work.

In the same periodical, pp. 287-291, W. Amelung adds a note on the Apollo Belvedere. The quiver is antique so far as it is preserved, and what Kieseritzky calls a 'clasp' on the back is merely part of the quiver-strap. The maker of the Stroganoff bronze has reproduced the strap in an unintelligent way, while omitting the quiver. Granted that the bronze is genuine, and the aegis a correct restoration, it has no value for the restoration of the marble statue. Furtwängler has proved that the Apollo Belvedere held a laurel branch with fillets in his right hand, and since he wears the quiver he must have carried the bow in his left. The laurel branch appears as an attribute of Apollo only in connection with the bow or the lyre. The former is far more common, the latter occurring only on coins.

The Aphrodite of Melos.—In *R. Ét. Gr.* XIII, 1900, pp. 302-370 (2 cuts), Étienne Michon publishes, with a commentary, a considerable number of letters and records relating to the discovery of the Aphrodite of Melos, its arrival at the Louvre, and its subsequent fortunes. Several of the fragments and other objects found with the Aphrodite have disappeared. The bearded herm, however, and its base with the inscription [Θ]εοδωρίδας Λυσιστράτο[υ] Ἐρ[μῆ] have been found in the Louvre and are now reunited (cut). The head of the herm is an archaistic bearded Hermes. The inscription is in letters of the early fourth century at latest. In Voutier's drawing this bearded Hermes stands on this base, and his drawing is now shown to be correct. He puts a beardless herm on the base with the inscription of Agesander of Antioch on the Maeander. If this drawing also is correct, the inscription of Agesander cannot be connected with the Aphrodite unless the statue is grouped with a beardless herm. It is not unlikely that the inscription of Theodoridas is without any connection with the Aphrodite. So the dedicatory inscription of the same Theodoridas on the base of what was probably a statue of himself has no necessary connection in date or authorship with the statue of Poseidon with which it was found. The inscription of Theodoridas is discussed also by A. Héron de Villefosse, *C. R. Acad. Insc.* 1900, pp. 465-472; 2 pls. In *Chron. d. Arts*, December 22, 1900, S. Reinach discusses Michon's article, and concludes that the beardless herm to which the inscription of Agesander belongs agrees in style with the date of the inscription (200-150 B.C.), and may have been grouped with a statue, but that neither this herm nor the bearded one with the inscription of Theodoridas has anything to do with the Aphrodite.

A Marble Head of a Negro.—The seventieth *Winckelmannsprogramm* of the Archaeological Society of Berlin (37 pp.; 2 pls.; 22 figs.) contains a discussion by Hans Schrader of a marble head in the Berlin Museum (inventory No. 1503). The head, slightly above life size, appears to have been found in the Thyreatis with other remains of Roman date. It is a portrait of about 200 A.D. The original was evidently a mulatto and a man of great

strength of character. Several other works are compared. The bronze head of a mulatto or quadroon, found by Smith and Porcher at Cyrene (*History of the Recent Discoveries at Cyrene*, pl. 66, p. 42; RAYET, *Monuments de l'art antique*, II, pl. 14), and the bronze head of a boxer from Olympia are ascribed to a time before Lysippus, not far from 400 B.C. The bronze from Cyrene was probably the head of a charioteer. The marble head of a negro is one of the best specimens of Roman sculpture of about 200 A.D.

The Marsyas from Tarsus. — In *Mon. Mém. Acad. Insc.* VI, pp. 145-148 (pl. xiii; fig.) André Joubin publishes the statue of Marsyas from Tarsus (not from Tralles) now in Constantinople. He attributes it to the Rhodian school (150-50 B.C.) to which the Laocoön belongs.

A Statue of Heracles in Florence. — In *Jh. Oesterr. Arch. I.* III, 1900, pp. 213-214, H. Vysoký urges the view that the statue in Florence (Amelung, *Führer*, No. 267), which has been called Cronus and Hephaestus, is really a representation of Odysseus. Maximilian Mayer and Milani have already recognized the possibility of this.

A Bone Pyxis. — In *Mon. Mém. Acad. Insc.* VI, pp. 159-173 (pl. xv; 6 figs.) Hans Graeven publishes two fragments of a bone pyxis from Athens, adorned with a relief representing the birth of Apollo and Artemis. The work, though not fine, is derived from a good original. The pyxis was probably made not earlier than the second century. Such boxes were used for jewel-cases and the like, but also in religious ceremonies. Those without covers were always for the latter purpose.

Some Recent Articles on Greek Sculpture. — In *R. Ét. Gr.* XIII, 1900, pp. 373-404 (12 cuts), Henri Lechat, in his 'Bulletin archéologique,' discusses the following articles: A. Furtwängler, 'Neue Denkmäler antiker Kunst. I. Mykenische Bronze-statuetten aus Kleinasien,' *Sitzb. Mün. Akad.* 1899, ii, pp. 559-566; D. Philios, *Χαλκοῦν ἄγαλμα Ποσειδῶνος ἐκ Βοιωτίας*, *Ἐφ. Ἀρχ.* 1899, pp. 57-74; the objections of E. Babelon (*B. Soc. Ant. Fr.* 1900, p. 171) to Mahler's contention (*Jh. Oesterr. Arch. I.* 1899, pp. 77-80) that the Oppermann Heracles was part of a group of Heracles and Achelous; Th. Reinach, 'Un document nouveau sur la chronologie artistique et littéraire du V^e siècle avant J. C.,' *R. Arch.* XXXV, 1899, pp. 399-412; F. Studniczka, 'Eine neue Athletenstatue Polyklets?' *Jh. Oesterr. Arch. I.* 1899, pp. 192-198; F. Winter, 'Griechische Porträtstatue im Louvre,' *Jh. Oesterr. Arch. I.* 1899, pp. 78-93; A. Furtwängler, 'Ueber zwei griechische Originalstatuen in der Glyptothek Ny Carlsberg zu Kopenhagen,' *Sitzb. Mün. Akad.* 1899, ii, pp. 279-296; P. Herrmann, 'Neues zum Torso Medici,' *Jh. Oesterr. Arch. I.* 1899, pp. 155-173; P. J. Möbius and Fr. Studniczka, 'Zum kapitolinischen "Aischylos,"' *Neue Jahrb. f. d. Klass. Altertum*, 1900, pp. 161-176; O. Benndorf, 'Porträtkopf des Platon,' *Jh. Oesterr. Arch. I.* 1899, pp. 250-254; O. Benndorf, 'Dreifussbasis in Athen,' *ibid.* pp. 255-269; S. Reinach, 'Deux statuettes d'Aphrodite,' *R. Arch.* XXXV, 1899, pp. 369-375; P. Arndt, 'Antike Sculpturen der Sammlung F. A. von Kaulbach,' *Zeitschrift des Münchener Alterthums-Vereins*, XI, 1899-1900, Nr. for January, 1900 (in which Arndt interprets a head in the Kaulbach collection as Trophonius, and suggests that it is probably a Greek original of the fourth century, while he regards a female head in the collection as certainly an original and probably a portrait of a famous woman. Lechat thinks the statuette at Compiègne proves that this head represents

Corinna); G. Kieseritzky, 'Der Apollo Stroganoff,' *Athen. Mith.* 1899, pp. 468-484; S. Reinach, Bas-relief découvert en Mysie,' *R. Ét. Gr.* 1900, pp. 10-15; M. Besnier, 'Buste de César, appartenant à la collection du comte Grégoire Stroganoff, à Rome,' *Mon. Mém. Acad. Insc.* VI, 1899, pp. 149-158; E. Pottier, 'Tête archaïque de terre cuite au Musée du Louvre,' *Mon. Mém. Acad. Insc.* VI, 1899, pp. 133-143.

VASES AND PAINTING

Mycenaean Vases at Neuchâtel.—In *R. Arch.* XXXVII, 1900, pp. 128-147, Paul Dessoulavy describes, with 33 figs., 50 vases and a terra-cotta weight of Mycenaean style in the Museum of Neuchâtel. They were collected by Colonel Ch.-Ph. Bosset, governor of the Ionian Islands, who gave most of them to the museum in 1836, the rest being the gift of his family after his death in 1845. They were found at Livato, Same, Pronos, and Ithaca, chiefly at Livato. They belong to the third and fourth styles of Furtwängler and Loeschke. A few other objects in the Bosset collection are described.

The Vase signed by Cleomenes.—In *R. Arch.* XXXVII, 1900, pp. 181-203 (pls. xiii, xiv; fig.), E. Pottier defends against Furtwängler (*Neuere Fälschungen von Antiken*, pp. 20-22; cf. *Die Antiken Gemmen*, III, p. 98, note 5), the genuineness of the plastic vase signed by the Athenian Cleomenes, published by Collignon, *Monuments publics par l'Association des Études Grecques*, 1895-97, pp. 53-67, pls. xvi, xvii. The vase is republished and other related monuments discussed. Furtwängler's objections are refuted in detail.

Ionic Vases with Eyes.—Under the title 'Die ionischen Augenschalen,' J. Boehlau publishes in *Athen. Mith.* XXV., 1900, pp. 40-99 (36 cuts), a full discussion of the origin of the cylices with eyes on the outside. The Phineus cylix in Würzburg was long the only known Ionic example, but this article adds sixteen examples of Ionic originals, or Attic copies. The prevalence of the type shows the extent of the influence of Ionic art. In Italy, Ionic products disputed the market with Athenian wares, and they even entered Attica, where they were widely imitated, introducing the Dionysiac painting and the vase form which was used by the great cylix painters of the early fifth century. The paper is divided into the following heads: (1) Vases of the form of the Phineus cylix (including a full account of this work), eleven examples. (2) Cylices of another form, seven examples. (3) The form of the cylix. The older Corinthian and Attic cylices have a well-marked rim; this form is rimless, and in general has a low foot. (4) The decoration. The full form shows inside an apotropaic mask surrounded by a picture; outside the eyes, nose, and ears, originally also apotropaic. This complete form is seldom found. (5) Time and place of origin. The type cannot well be later than the beginning of the sixth century. The place is less clear, but seems to have been an Ionian city of Asia Minor or the islands, in possession of a highly developed artistic activity in close connection with Chalcis, probably a centre of Dionysiac worship, and perhaps connected with the colonization of the North. Many cities fill these requirements. Wolters suggests the possibility that these are the Τῆλαι καλῆραι of Alcaeus, or rather their clay counterparts. This is possible, but cannot be proved. (6) The influence of this Ionic type is shown on three amphorae.

Ring-shaped Bottles from Boeotia.—In 'Εφ. 'Αρχ. 1900, pp. 101-107 (2 figs.), K. Kourouniotes publishes two small ring-shaped vessels with handles, now in the National Museum at Athens. The first was bought in Thebes and is ornamented with circles and patterns similar to those on other Boeotian and Proto-Attic vases. It bears the inscription, *Μνασάλκεσ ποίεσε*. The second, also bought at Thebes (National Museum, No. 439), is adorned on one side with radiating heart-shaped leaves and palmettes, on the other with a rosette. Comparison with other similar vessels makes it probable that Tanagra was the place of manufacture. The vessels belong to the sixth century B.C.

A Forgotten Deinos.—In *R. Arch.* XXXVI, 1900, pp. 322-325, S. Reinach reproduces from a publication by Raffaello Politi, *Descrizione d'una Deinos o vaso in terra-cotta greco-siculo agrigentino* (Girgenti, 1837), the paintings of an Attic black-figured *deinos*. Five penteconters are represented, each with one mast in the centre. The vase is further adorned with scenes of combat and with leaves and patterns. Similar vases with representations of ships are mentioned.

The Progress of Euphronius.—In *Jh. Oesterr. Arch.* I. III, 1900, pp. 121-132 (3 pls.; 5 figs.), F. Winter republishes and discusses the red-figured amphora of the Berlin Museum (No. 2160), published before by Gerhard, *Etrus. u. Campan. Vasen*, Taf. viii. An unpublished interpretation of Friederichs is revived to the effect that Hermes has taken from the Silenus the *cantharus* and jug, and forces him to play the lyre. It is sought to connect the vase with the later manner of Euphronius, and the advancement which the works of that artist reveal is briefly treated. The head of Hermes on the vase bears a strong resemblance to the famous "Head of a Youth," from the Acropolis, and the head of Heracles on the Antaeus Crater of Euphronius is very like that on the stelé of Aristion. Does this, then, not give a hint that in sculpture, as well as in painting, a very marked progress in the style of an individual artist may be supposed? The point is worthy of careful consideration in such discussions as the relation of Antenor to the standing figure of the Acropolis, attributed to him, and to the group of the Tyrannicides.

Pandora and the Ghosts.—In *J.H.S.* XX, 1900, pp. 99-114, Miss Harrison, with the aid of certain vase-paintings and literary passages, disentangles the myth of Pandora, the Earth goddess, and her *πίθος*, the burial jar, from which the souls of the dead were liberated at the Anthesteria,—for this was originally a festival of All Souls, the Dionysiac character being comparatively late. For the name of the festival, A. W. Verrall (*ibid.* pp. 115-117) suggests a derivation from *ἀνά* and the obsolete *θέσσανθαι*, "pray," i.e. "the festival of the calling up of the dead."

Vases of Polygnotus.—In *Mon. Antichi*, IX, i, 1899, pp. 5-30 (3 pls.; 4 cuts), C. Robert discusses the three signed vases of Polygnotus and the myth of the rape of Deianeira in its various forms.

A Laocoön Scene.—In *Mon. Antichi*, IX, i, 1899, pp. 193-200 (pl.), M. Jatta publishes fragments of a red-figured vase found near Bari, having a Laocoön scene, which he interprets as following Sophocles.

The Meidias Vase.—In *Hermes*, 1900, pp. 661-663, C. Robert interprets the painting on the shoulder of this vase as one scene in the garden of the Hesperides. Medea has put the serpent to sleep that Heracles may take

the apples. Medea and the other persons present, except Heracles and Iolaus are regarded as having passed away from this life to that of the heroized or deified dead, though this conception is opposed to the usual mythological chronology.

Fragment of a Dated Panathenaic Amphora.—In *Cl. R.* 1900, pp. 474 f. (out), F. B. Tarbell publishes a fragment of a panathenaic amphora, with the inscription *τοδη*.—evidently part of an archon's name.—arranged *κιονηδόν*, near the right border of the space containing the picture, therefore at the right of the right hand column. The only possible archon is Aristodemus, 352–351 B.C. The arrangement of the name above described is therefore ascertained for that date.

Ἐπαύλια.—With the help of an Attic pyxis in Berlin, which gives three scenes of a wedding festival, L. Deubner (*Jb. Arch. I.* XV, 1900, pp. 144–154; pl.) discusses the various Greek terms for wedding presents: *ἀνακαλυπτῆρια*, given by the bridegroom to the bride when she is unveiled at the close of the marriage banquet, and *ἐπαύλια*, gifts of various friends, brought in procession to the house of the bridegroom on the day after the wedding proper.

Some Recent Articles on Greek Vases.—In *R. Ét. Gr.* XIII, 1900, pp. 406–412, Henri Lechat gives summaries and discussions of three articles: P. Hartwig, 'Die Anwendung der Federfahne bei den griechischen Vasenmalern,' *Jb. Arch. I.* 1899, pp. 147–167; P. v. Bienkowski, 'Zwei Attische Amphoren in Madrid,' *Jh. Oesterr. Arch. I.* 1900, pp. 62–72; S. Reinach, 'La naissance de Ploutos sur un vase découvert à Rhodes,' *R. Arch.* XXXVI, 1900, pp. 87–98.

The Paintings of Panaenus on the Throne of Zeus at Olympia.—In *Jb. Arch. I.* XV, 1900, iii, pp. 136–144, H. Blümner discusses the paintings of Panaenus in the temple of Zeus at Olympia, and, rejecting all the arrangements yet suggested, places the pictures again under three sides of the throne, but so disposed that the two inactive female figures of each triad stand on either side of a pair of mythological groups, separating them from the legs of the throne. Thus Heracles and Atlas (1), with Theseus and Pirithoüs (2), stood between Hellas and Salamis (3); Heracles and the lion (4), with Ajax and Cassandra (5), between Sterope and Hippodamia (6); Heracles and Prometheus (7), with Achilles and Penthesilea (8), between the two Hesperides (9).

Paintings on Marble.—In *R. Ét. Gr.* XIII, 1900, pp. 404–406, Henri Lechat summarizes and discusses *Der müde Silen, Marmorbild aus Herculanum, nebst enim Excurs über den Ostfries des sog. Theseions (23^{es} Hallisches Winckelmannsprogramm)*, by Carl Robert.

The Aldobrandini Nuptials.—In *Hermes*, 1900, pp. 657–661, C. Robert gives a new interpretation of the painting in the Vatican Library. The figure ordinarily called the bridegroom is Hymenaeus. This scene is in the bride's maiden chamber. The three women in the right-hand group are a cithar player, a servant, and the nymphentria. The left-hand group consists of the bride's mother and two serving women. The water here is not for a bath, but for sprinkling. The three scenes are in the house of the bride's parents, not in her new home.

INSCRIPTIONS

Inscriptions of Greek Associations. — In *Rhein. Mus.* 1900, pp. 501-519, E. Ziebarth publishes as a supplement to his book *Das Griechische Vereinswesen*, a list of inscriptions relating to associations found since the appearance of the book, with remarks on these and on previously known inscriptions. The additions are many, derived from various parts of the Greek world. Only one inscription is published here for the first time. It is a decree of the *σύνδοκος* or *θιασῖται* of Dionysus, at Myconus. The *senatus consultum* concerning the quarrel between the Dionysiac artists of Athens and those of the Isthmus and Nemea (cf. *Am. J. Arch.* 1900, p. 357) is discussed.

The Psephism of Archinus. — In *Athen. Mith.* XXV, 1900, pp. 34-39, H. von Prott discusses the Psephism of Archinus, published by Ziebarth, *Athen. Mith.* XXIII, 1898, p. 27 ff. (Cf. *Am. J. Arch.* III, 1899, p. 131.) The decree is from the archonship of Pythodorus, not Xenaenetus, and contains the gift of citizenship to those metics who had joined Thrasylbulus at Phyle. The missing portion of the decree must have contained the rewards mentioned by Aeschines (II, 187, 190). Some corrections in the text are also given.

A Decree in Favor of the Olynthians. — In *C. R. Acad. Insc.* A. Wilhelm discusses the fragmentary inscription *C.I.A.* II, 224, finds it a part of a decree granting freedom from metic-taxes to the people of some town recently taken by Philip who have come to live in Athens, argues that the town was Olynthus, and suggests that the mover of the decree was Demosthenes. He restores the lines, part of which is presented as follows: [περὶ ὧν οἱ Ὀλύνθιοι ἔδοξαν ἔννομα ἰκετεύειν ἐν | τε τῷ δήμῳ καὶ ἐν τοῖς συμμαχίοις, [ἐπειδὴ σῖμμαχοι γινόμενοι τ]οῦ δήμου τῷ Ἀθηναίων καὶ τῶν συμμαχίων ἐκπεπ[τωκότες εἰσὶν | ὑπὸ Φιλίπ]πο καὶ ἀξιο[συν Ἀθήνησιν | ἀτέλειαν] τοῦ μετοικ[ίου διαχειρο]τονῆσαι τ[ὸν] δῆμον αὐτ[ή]κα πρὸς αὐτ[ὸς] εἰ δοκε[ῖ] δούναι τοῖς ἐκπεπτωκό[ισιν Ὀλυνθί]ων τὴν ἀτέλ[ειαν] τοῦ μετοικίου εἶτε μὴ. ἐ[ὰ]ν δὲ [δοκῇ αὐτῷ | διαχειροτο]ν[ῆσαι] δ[ιδόναι] αὐτοῖς τὴν ἀτέλειαν, τὸν μὲν [γραμματέα | τῆς βολῆς ἀναγράψ]αι ἐν σ[τήλῃ] λιθίνῃ ἐν ἀκροπόλει τῇ ὀνόματα αὐτῶν καὶ ὅτι | φεύγοσι ἐκπολι]ορ[κ]ηθέν[τες] ὑπὸ Φιλίππου· εἰς δὲ τὴν ἀ[να]γ[γ]λ[ῃ] αὐτῶν τῆς στήλης κτλ.

The Boeotian Archon Lycinus. — In *R. Ét. Gr.* 1900, pp. 187-197, Maurice Holleaux adds Lycinus to the eleven archons of the Boeotian confederacy whose dates are known. Deductions from the evidence of inscriptions place Lycinus between about 215 and 203 B.C.

An Inscription from Chios. — In *Berl. Phil. W.* December 29, 1900, L. Büchener discusses, but without attempting to give the text, the inscription in Chios mentioned by Studniczka, *Athen. Mith.* XIII, 1888, p. 182. The inscription was a long one, in two columns of forty-five lines each, and contains a list of taxes or duties connected with some funds given by a King Attalus, probably Attalus II or III. Several names of persons and places in Chios appear.

Account of the Stewards of the Temple at Delos. — A fragment of an inscription from Delos has recently been acquired by the Louvre. It contains in fragmentary condition the account of the *ταμίαι* Kaibon and Mnesiclides of the year 181 B.C., the archonship of Phocaieus. (TH. REINACH, *R. Ét. Gr.* 1900, pp. 170-178; pl. iii.)

The Epigram of Pausanias at Delphi. — The epigram from Delphi in *B.C.H.* XXIII, 1899, p. 383, should be restored :

Εἰκόνα τήνδ' ἐπατήρ Ἀγησιπόλει φιλῶι νῖωι
Πα[υσανίας ἀν]έθηκε· Ἑλλὰς δ' ἀρετὰν ὁμοφωνεῖ.

It refers to Hagesipolis, the son and successor of the banished Pausanias, who was king of Sparta 395/4 to 381/0. It shows that Pausanias survived his son. The character of the writing shows that the inscription in its present form belongs to the second century B.C., but the remains of the artist's inscription seem to belong to the fourth century. (ADOLF WILHELM, *Athen. Mitth.* XXV, 1900, pp. 306-307.)

The Promanteia. — In *R. Ét. Gr.* XIII, 1900, pp. 281-301, Ph. E. Legrand discusses the question whether the *promanteia* at Delphi and other oracles was the right to consult the oracle before others or, as suggested by Homolle, *B.C.H.* 1895, pp. 60-61, the right to consult in behalf of some one else without the intervention of a citizen of the place or a proxenus. This right would include that of consulting the oracle in one's own behalf. Legrand concludes that the *promanteia*, as understood by Homolle, may have existed at Delphi, but that the usual explanation is more probable.

The Sacred Funds at Eleusis. — In 'Εφ. Ἀρχ. 1900, pp. 73-86 (supplementary pl.), Stephanos N. Dragoumis publishes photographs of the inscription relating to the expenditure of some sacred funds at Eleusis and the dedication of *θυμιατήρια*. The exact reproduction is accompanied by some remarks and corrections of the previous publications in 'Εφ. Ἀρχ. 1894, pp. 173 ff., 241 ff., and *Athen. Mitth.* XXII, pp. 381-386.

Hiero II and Gelo. — In *Jh. Oesterr. Arch. I.* III, 1900, pp. 162-171 (1 fig.), A. Wilhelm republishes and discusses the inscription from Syracuse in *I.G.S.A.* 7. He offers a new restoration, and connects the inscription with Hiero II. Hiero's son Gelo toward the end of the former's reign appears to have shared the kingly authority with his father. The inscription may be associated with such an assumption of power on Gelo's part.

The Inscription C.I.G. I, 1118. — In *Jh. Oesterr. Arch. I.* III, 1900, pp. 145-162, A. Wilhelm publishes a careful restoration of the text of the inscription in *C.I.G.* I, 1118. He holds that the peace for which provision is made is to be assigned to the year just following the battle of Mantinea, 362-361 B.C.

GENERAL AND MISCELLANEOUS

Mycenaean Rings. — In *R. Arch.* XXXVII, 1900, pp. 7-14 (1 pl.; 1 fig.), Chr. Tsountas publishes enlarged reproductions of the ring published by Schliemann, *Mycenae*, fig. 530, that published by Tsountas, *Μυκῆναι*, pl. V, 3, p. 166, and a third, from a tomb in Mycenae, hitherto unpublished. These engravings in silver and gold are compared with those in stone. An object at the side of the second and third rings represents a building, not a throne. The three women represented are worshippers, as are those on a gem published in a cut. Mycenaean rings were not made especially for seals, but for ornament, for the engravings show a proper use of right and left hands, while their impressions do not. Moreover, rings of different sizes are found with one corpse.

Survival of Mycenaean Ornament. — A curious comparison is that of an ivory knife handle carved with lions, from the beehive tomb at Menidi, with the reference to a similar ornament in Aristophanes, *Lys.* 230: οὐ στήσομαι λέαν' ἐπὶ τυροκνήστιδος. (O. BRUECKNER, May meeting Berl. Arch. Gesellsch., *Arch. Anz.* 1900, p. 103.)

The Argive Heraeum and Bacchylides, xi, 43-84. — In *Cl. R.* 1900, p. 473 f., Charles Waldstein explains Bacchylides xi, 43-84, as referring to a very early city about the site of the Argive Heraeum. This early city is called Argos by the poet. The daughters of Proetus despise it and its temple in comparison with their father's new city of Tiryns and are punished for so doing.

Moulds from Crete. — In 'Εφ. 'Αρχ. 1900, pp. 26-50, pls. iii, iv, Stephanos A. Xanthoudes publishes and discusses two stone moulds from Seteia in eastern Crete. On one side of the first is a draped female figure with rich headdress, standing erect and holding in one hand a flower, in the other some indistinguishable object. At her right is an ornamented disk on a pedestal. A crescent is inscribed in the disk. At the other side of the figure is a large ring with rays. Within is a second ring and a cross. The figure represents Istar-Astarte as goddess of the evening star and also as nature-goddess, standing between the sun and the moon. On the other side is a curious ornament interpreted as the headdress of the Egyptian goddess Hathor. The other mould has on one side two ornamental double axes, on the other a draped female figure holding up an axe in each hand. This is Istar-Astarte in her warlike character. The nature of this goddess and her relation to Aphrodite and other Greek goddesses is discussed. The moulds are of Asiatic origin, probably the work of a Phoenician, though perhaps made in Mesopotamia or possibly in Crete itself. They may have been used for casting or for beaten work or both. The work is somewhat rude and of early, though uncertain, date.

Ancient Ithaca. — In the *Nation*, August 16, 1900, Herbert Weir Smyth gives the arguments in favor of Dörpfeld's theory that the Homeric Ithaca was the later Leucas or Leucadia, the situation and nature of the latter island agreeing in many respects with the Homeric description. No remains of the Mycenaean epoch have been found in Ithaca.

Homeric Rites of Interment. — In *Sitzb. Mün. Akad.* 1900, i, pp. 199-279, W. Helbig discusses the rites of burial as they appear in the Homeric poems, with special attention to the implied beliefs. The Mycenaean cult of the dead was very important. The Aeolians, as appears from parts of the *Iliad*, adopted cremation and believed that after cremation the dead had no further sensation. Hence they did all they could for the dead in the short time between death and cremation. The Ionians, thinking this brief period of little importance, had simpler rites. After cremation the ashes were buried without gifts. The burial customs of other parts of Greece, especially of Attica, are also discussed, and those of Italy compared.

The Topography of Ancient Athens. — In *Cl. R.* 1900, pp. 369-376, L. R. Farnell discusses Thucydides II, 15. He finds that Thucydides says that the ancient city consisted of the acropolis and regions south of it; that the Olympieum referred to was where the great columns now stand by the Ilissus; that the Pythium was in the same region; that the Enneacrunus was probably in the Ilissus, not near the Pnyx; that the Lenaea and

Anthesteria were one festival, though perhaps originally distinct; that the Lenaean, the temple of Dionysus ἐν Λίμναις, and the temple of Dionysus Eleuthereus were identical, and that this temple was near the Dionysiac theatre, not in the direction of the Pnyx, where Dörpfeld discovered remains of wine-vats among the ruins of a temple and precinct. Λίμναι is not derived from ληρός, wine-vat, but from λήναι, maenads.

A Type of Greek Tombs. — Under the title 'Ueber einige Grabhügel bei Agia Triada' (*Athen. Mith.* XXV. 1900, pp. 292-305; 9 cuts), R. Delbrück describes several types of monument used for the graves of the poor, the remains of which can be found in the rubbish about Agia Triada near the Dipylon. *A.* A small building of sun-dried brick covered by a couple of roof tiles. The presence of many such tiles shows that these easily built monuments must have been numerous. *B.* This same type is made more imposing and permanent by using rough stone covered with stucco. Such a monument could be used to cover a group of graves. *C.* To late Greek or early Roman time belongs a similar monument partly covered by the walls of the church. The stucco is decorated with a well-preserved painting showing a basket for wool, and two mirrors. *D.* A similar structure of early Roman times with slightly rounded roof was partly destroyed in the earlier excavations, but may still be traced. *E.* The late Roman structures are all in the highest levels. They all are in the form of a chest with a low arched cover, usually of stones and fragments of earlier structures set in a mass of lime and covered with stucco. In some cases a tablet for the inscription or a relief is set into the wall. This general type prevailed for upwards of six centuries. Similar structures in the sixth century are proved by the *pinakes* which decorated them, and it is possible that a form of the seventh century has been found at Vurva. Such on a large scale were the graves at Rheneia and Thespiea, and the same type has been found at Samos by Boehlau. Originally the monument represents the early Greek house.

Various Questions. — In *Röm. Mith.* 1900, pp. 142-176 (5 figs.), E. Petersen discusses the following questions: (1) The Apollo and Athena of the bronze group of Phidias dedicated by the Athenians at Marathon, the former represented by the statue in the Museo delle Terme, the latter by the Lemnian Athena. (2) The wrestlers of the Uffizi, a work probably copied from a bronze original of the middle of the fourth century B.C. (3) A wall painting in the house of the Vettii at Pompeii, which represents Zeus seated, with the sceptre, and is not, as recently maintained, a copy of Apelles's portrait of Alexander the Great. (4) The figures of the gods on the Arch of Augustus at Rimini. (5) A sarcophagus relief showing a physician seated before a cupboard, containing rolls of manuscript. On top is a case of surgical instruments. A suggestion is made for the completion of the fragmentary inscription, in Greek elegiacs.

ITALY

ARCHITECTURE

The Vestal Precinct in the Forum. — In *Nuova Antologia*, August, 1900, is an article by G. Boni, in which he gives suggestions for the reconstruction of the temple of Vesta in Rome, and argues that the form of the precinct of Vesta in the Forum is derived from that of the terramare.

An abstract and criticism of this article by George Dwight Kellogg, is in the *Nation*, October 18, 1900.

The Temple of Vespasian at Pompeii. — A. Mau, in *Röm. Myth.* 1900, pp. 133-141 (2 figs.), suggests a reconstruction of the temple of Vespasian at Pompeii. He places in front four rather slender columns of about 0.4 m. diameter, resting upon bases about 1 m. high, connected by sculptured marble slabs. The middle intercolumniation is wider than the two others. In the same article, Mau argues in support of his theory that a part of the Cupid frieze in the house of the Vettii represents the manufacture and sale of oil; it cannot represent the office of a physician.

SCULPTURE

An Ideal Head of Hesiod. — In *Hermes*, 1900, pp. 650-657, C. Robert interprets the figure of a bearded man on the sarcophagus in Naples (Arndt-Amelung, *Einzelverkauf*, 530, Gerhard, *Neapels Antike Bildwerke*, p. 133, No. 502), and the head in the Capitoline Museum (Arndt, *Gr. u. Röm. Porträts*, pls. 325, 326, Hellbig, *Führer*,² I, 319, No. 478), as Hesiod. The original was Rhodian work of the time of the Flavian emperors, to which time the Laocoön and the busts of the blind Homer are also ascribed. See Pliny, *N.H.* 35. 9.

Bust of Julius Caesar. — In *Mon. Mém. Acad. Insc.* (Fondation Piot) VI, pp. 149-158 (pl. xiv; 4 figs.), Maurice Besnier publishes a marble bust found in Egypt, now the property of Count Grégoire Stroganoff. It is intact, except that the nose is restored and some injuries about the head look as if a wreath or diadem had been broken off. The face is thin and wrinkled. The work belongs to the first century B.C. It is a characteristic and realistic bust of Julius Caesar.

The Dioscuri at Tarentum. In *Röm. Myth.* 1900, pp. 3-61 (2 pls.; 10 figs.), E. Petersen discusses in detail a number of terra-cotta votive offerings from Tarentum, representing the Dioscuri. They are small reliefs and belong to the second half of the fourth century B.C. The gods are shown standing without horses, standing near their horses, riding, driving, as small figures on horseback above a dining-table, and finally themselves seated at such a table. The fact that the two gods are always alike in attitude, attributes, etc., is sufficient proof that it was only an idea of the later poets that gave them distinguishing characteristics. Without horses, they are represented as patrons of athletic games, and their amphorae — an almost constant attribute — were supposed to contain the wine that served as a prize. On horseback they are sometimes represented as ἀναβάται, sometimes as taking part in the torch-race. Three other classes of Tarentine monuments show similar artistic elements, — coins, representing Taras and Phalanthus; terra-cottas from the sanctuary of Dionysus; and vases with sepulchral scenes.

Roman Sarcophagi at Clieveden. — In *J.H.S.* XX, 1900, pp. 81-98 (6 pls.; cut), C. Robert discusses eight sarcophagi, some of which have been published before. They are of the second and third centuries and most of them introduce portraits as medallions or among the mythological figures. The Theseus reliefs are especially interesting.

Some Portraits of the Flavian Age. — In *J.H.S.* XX, 1900, pp. 31-43 (4 pls.), J. W. Crowfoot discusses certain portrait busts of the time of

the Flavian emperors and of Trajan, contrasting their lifelike simplicity most favorably with earlier and later work. The shoulder-bust is characteristic of the period.

VASES

An Early Italian Vase.—In *B. Paletn. It.* 1900, pp. 177-183 (fig.), G. Patroni discusses a vase recently acquired by the Naples Museum. It belongs to the class of early Italian vases made by Greek colonists in Campania, and is ornamented with motives of the Dipylon and Phalerum ware. In its form, it recalls the Villanova ossuary.

INSCRIPTIONS

The Early Inscription of the Forum.—In *Archiv für Lat. Lexikographie*, XII, 1900, pp. 102-113, W. Otto gives a succinct résumé of the latest discussions of the archaic inscription in the Roman Forum. He points out first the various problems connected with the whole structure where the cippus stands, which have been emphasized by further investigation rather than removed, and secondly describes the three or four principal attempts to interpret the inscription itself. After having called attention to the objections which can be raised against each of these, and the very small number of words which can be definitely made out and upon which all are agreed, he concludes with the opinion that further study of this monument is entirely profitless.

In *Berl. Phil. W.* September 1 and 8, 1900, Otto Keller discusses recent articles on this inscription by Ceci, Enmann, Dessau, Hülsen, and Compagnotti and L. v. Schröder's interpretation of the Duenos inscription. *Ibid.* October 6, he discusses Modestow's Russian treatise on the monuments of the period of the kings and the earliest Latin inscription, and Frese's article on the inscription in the supplement to the *Allgemeine Zeitung*.

An Epigraphic Manuscript of Peiresc.—A manuscript of Peiresc, containing forty-five Latin inscriptions, only seven of which are unedited, is published, with a commentary, by Seymour de Ricci in *R. Arch.* XXXVI, 1900, pp. 425-440. The manuscript, in the library of Carpentras, is entitled *Mémoires pour l'histoire de Provence*, t. III.

COINS

Aes Signatum.—In *R. Ital. Num.* 1900, pp. 147-152, Francesco Gneecchi advances a new theory concerning the so-called *aes signatum*. The earliest metallic medium of exchange of the Romans was the *aes rude*,—lumps of bronze that passed current wholly by weight. This "money" needed and had no official sanction; it was merely a convenient standard for the transaction of affairs, and it continued to be made and used even after the introduction of official money in the form of "*aes grave*." Gneecchi observes that there is an essential difference in the types chosen for the *as* and its divisions and those found on the "*aes signatum*." The former is always stamped with the head of a divinity, while the "*aes signatum*" has invariably a symbolic type, as ox, eagle, augural chickens, tripod, sword, etc. Furthermore, the *aes grave* always has a mark of value, the "*aes signatum*" never. Gneecchi argues that these blocks of metal cannot have been weights, nor multiples of the *as*, nor ingots stored in the mint. He holds that they were

simply a "private money," the natural improvement on the *aes rude* which remained still in use to a certain extent, notably for religious purposes; and that both design and form were intended clearly to distinguish them from the *aes grave* of the State. Like the *aes rude*, they passed wholly by weight.

The Constantinian Coinage of London.—In *Num. Chron.* 1900, pp. 108-147, Jules Maurice presents an exhaustive study of the coins issued from the London mint during the Constantinian period, 306-326 A.D., following his similar studies of the mints of Rome (*R. Num.* 1899, p. 343) and Antioch (*Num. Chron.* 1899, p. 218).

GENERAL AND MISCELLANEOUS

Early Musical Instruments.—L. Pigorini describes in *B. Paletn. It.* 1900, pp. 183-185 (2 figs.), a *tibia* of bone, which had served the purpose of a musical instrument, and a horn of terra-cotta, both found in terramare of the bronze age.

Civilization of the Bronze Age in Etruria.—In *B. Paletn. It.* 1900, pp. 133-151 (pl.), G. A. Colini describes objects from the tomb of Battifolle (Cortona), and other archaic objects of Etruria, to prove that in the provinces of Orvieto, Siena, and Arezzo, there was a neolithic civilization like that of the other regions of Italy, and a civilization of the bronze age analogous to that across the Apennines, especially in the lower valley of the Po.

The Niger Lapis and Objects near it.—In *Rend. Acc. Lincei*, 1900, fasc. 5-6, pp. 289-303 (10 figs.), L. A. Milani offers an explanation of the *niger lapis* and the objects underneath it. The so-called tomb of Romulus is the *mundus*; the rectangular structure behind the two bases is the altar that covered the *mundus*; the tufa cone and the two bases are the essential parts of the primitive *templum*: on the square pedestal between the two bases stood the symbol of Tellus; the cone near the bases represents Jupiter Terminus. The inscribed *cippus* contains regulations regarding the *locus sacer*. After the place had been violated in 390 B.C., it was covered with *maceria* and a *niger lapis*, for the sake of protection. The latter was reduced in size during Caesar's changes in the Forum.

The Cameo of the Sainte Chapelle.—In *Hermes*, 1900, pp. 663-668, C. Robert interprets the scenes on the cameo in Paris, representing the sending of Germanicus to the East. Above, Divus Augustus sits as a spectator, while Phraartaces offers the orb of the world to Gaius Caesar, who enters the upper world upon a winged horse. The other male figure is the younger Drusus. In the central scene, the seated figure behind Livia is the Parthian king Vonones. The figure with the attributes of Triptolemus on the onyx vase in Brunswick is probably Gaius Caesar.

Athena Siciliana at Naples.—A late inscription in bad Greek mentions Ἀθηνᾶ Σικελίη at Naples. In *Arch. Stor. Nap.* 1900, pp. 335-354, Ettore Pais shows that Athena was worshipped at Naples, and that the temple of Athena Siciliana was on the Punta della Campanella, opposite Capri. This is the point called Minervae promuntorium, Liv. XLII, 29, 3.

The Four Great Aqueducts of Rome.—In *Cl. R.* 1900, pp. 325-327, Thomas Ashby, Jr., describes the courses of the four great aqueducts of ancient Rome,—the Anio Vetus, Anio Novus, Marcia, and Claudia.

FRANCE

Gallic Gods.—An inscription found near the Via Aurelia, between Pourrières and Pourcieux, reads *Cell . . . eo | Placidus | adreisson | i., v.s.l.m.* The first line (*Celleo* or *Celeo deo*) gives the name of a local deity *Celeus*. An inscription found in 1892 near Trets gives the name of a deity *Acidus* or *Aciluleus*. The inscription mentioned by Gilles (*Voies romaines*, p. 44) and Chaillan (*Recherches sur Trets et sa vallée*, p. 22) as on an altar to *Bonus Erentus* has the letters N. D. and may be a dedication to some deity whose name began with D. (C. JULLIAN, *Revue des Études Anciennes*, II, 1900, pp. 233-236.)

Praefectus Fluminis Ovidis.—In *C. R. Acad. Insc.* 1900, pp. 458-461, A. Hérou de Villefosse explains the inscription *C.I.L.* XII, No. 1359, *M. Calpurnius | Tutor | Praefectus | F. O.* The last line should be completed *F(luminis O)vidis*. Other references to the Ouvèze are cited and its importance indicated.

GERMANY

Caesar's Bridges.—In *Jb. V. Alt. Rh.* 1899, H. Nissen discusses (pp. 1-29, map) the location of Caesar's two Rhine bridges, and Constantin Koenen describes in detail (pp. 30-55; 9 pls.) the excavations of 1898-9 on the west bank of the Rhine near Neuwied. This work has proved the existence of a semicircular fortification of the time of Julius Caesar, consisting of a wall and two parallel ditches, and, in one corner of this early fortification, a later one, which is ascribed to Drusus. Extending from Caesar's work across the river are remains of a bridge, which is thought to be the second one built by Caesar across the Rhine.

The Pedestal of the Jupiter at Bonn.—A statue of Jupiter in the Museum at Bonn rests on a pedestal adorned with a relief of Juno. Emil Krüger, in *Jb. V. Alt. Rh.* 1899, pp. 56-61 (pl.), by comparison with a sculptured pillar in the Wallraf-Richartz Museum at Cologne, shows that the pedestal was originally much higher, and that there was probably a relief of Minerva below that of Juno.

Megalithic Tombs in Westphalia.—In *Jb. V. Alt. Rh.*, 1899, pp. 127-135, J. B. Nordhoff has an article on the megalithic tombs of Westphalia, some of which he thinks were constructed after the beginning of the Christian era.

BYZANTINE AND MEDIAEVAL ART

GENERAL AND MISCELLANEOUS

A Byzantine Ivory.—In *Mon. Mém. Acad. Insc.* VI, pp. 91-93 (pl. vii), G. Schlumberger publishes a Byzantine ivory of beautiful workmanship, formerly in the Bonnaffé collection, representing the crucifixion. At the bottom, under the cross, is a recumbent bearded man into whose body the cross extends. An inscription reads, *ὁ σταυρὸς ἐμπαγείσιν ἐν τῇ κοιλίᾳ τοῦ Ἀδῶν*, "the cross fixed in the belly of Hades." A second fine Byzantine ivory, in the Chalandon collection, is published on the same plate.

A Byzantine Ivory Casket.—In *Mon. Mém. Acad. Insc.* VI, pp. 191-194 (pl. xviii), Gustave Schlumberger publishes an ivory casket in the Kircher museum in Rome. On its sides are scenes from the life of David.

A Greek inscription shows that it was a wedding gift to a queen, but who she was is unknown. On the top are Christ, the Virgin, and saints. The work belongs to the ninth or tenth century.

The Cameo of Nicephorus Botoniates.—The Byzantine cameo inscribed with the name of Nicephorus Botoniates, with a representation of the bust of the Virgin, engraved between 1078 and 1081, has been lost since 1661. It is now in the "Schatzkammer" in Vienna. It was found at Heiligenkreuz by F. de Mély, who publishes it in *Mon. Mém. Acad. Insc. VI*, pp. 195-200 (fig.).

Byzantine Ivory Reliefs.—The subjects of Byzantine ivory reliefs may in many cases be shown to have originated in Early Christian miniatures. Subjects relating to Joshua in ivory reliefs in some cases preserve almost the identical compositions of the celebrated Joshua rotulus in the Vatican. Similarly, two reliefs from the life of Joseph, one in Dresden, the other formerly in the Sneyd collection and preserved in an Arundel Society cast, are shown by Hans Graeven in an article 'Typen der Wiener Genesis auf Byzantinischen Elfenbeinreliefs,' published in *Jb. d. Kunsth. Samm. d. Allerhöchsten Kaiserhauses*, 1900, pp. 91-111, to have been derived from the Vienna Genesis. This celebrated Ms. is probably only a fragment of a Hexateuch the greater part of which is lost. But in Byzantine ivory reliefs representing the life of Joseph it is probable that other compositions from the story of Joseph are preserved to us in all their essential features. The Vienna Genesis contained, therefore, not a unique series of illustrations as is supposed by Wickoff, but typical illustrations which originated in Early Christian times and were spread abroad in many copies.

The Influence of French Art upon German Art in the Thirteenth Century.—In *R. Arch.* XXXVII, 1900, pp. 204-219, G. Dehio traces the influence of French art, especially architecture and sculpture, upon German art. This influence was almost entirely limited to the thirteenth century. It came at first less from the Isle de France than from the other provinces. At first it showed itself chiefly in details. Then French Gothic was adopted in its entirety, but almost immediately the Germans began to develop a Gothic of their own. Many Germans worked and studied in France, and probably French workmen also went to Germany. The architect of the choir of the cathedral at Cologne knew the designs for the upper parts of the choir at Amiens, which were not built until later than the choir at Cologne. Perhaps the architect of the two buildings was the same man, possibly a German, Girard von Rill. Numerous monuments are discussed.

The Evolution of Decorative Motives.—In the *Am. Arch.*, June 2, 1900, A. D. F. Hamlin continues his series of articles on the Evolution of Decorative Motives. The present article deals with the acanthus and spiral scroll, of which the Ionic and Corinthian capitals are treated as special cases.

Corinthian Capitals in Mediaeval Architecture.—In the *Am. Arch.* 1900, September 15, A. D. F. Hamlin in discussing the Evolution of Decorative Motives treats of the Corinthian Capital, noting the fact that it is easier to find close copies of the Roman Corinthian Capital in the mediaeval period than in that of the early renaissance.

Relics of Constantinople.—F. de Mély continues his studies of the Sacred Thorns in the *R. Art Chrét.* 1900, pp. 393-409. The present article

considers the Sacred Thorns preserved at Alexandria, Amiens, Angers, Aosta, Arras, Autun, Beauvais, Berne, Bouillac, Bozzolo, Bruges, Cambrai, Carpentias, Cefalu, Chalette, Chambère, Charroux, Chateau-Ponsac, Cluny, Donauwörth, and Einsiedeln.

Altar Crosses in the Sixth Century.—Altar crosses seem to have been unknown in the Roman churches until after the twelfth century, but were in use amongst the Syrian Nestorians certainly as early as 872 A.D. The Rabbûlâ-Evangelarium, in the Laurentia in Florence, dating from 586-587 A.D., contains a fully developed representation of the Crucifixion, and a sixth century poem by Monk Abraham mentions the cross falling from the altar and breaking. (*Röm. Quartalschr.* 1900, pp. 70-71.)

Two Early Christian Infulae.—In the collection of Th. Graf, in Vienna, are two leather Coptic bands decorated with paste imitation of gems. Graf considered them leather belts, but from the general liturgical characters of the other Coptic finds in the possession of Herr Graf and from representations on Early Christian monuments, Heinrich Swoboda, in *Röm. Quartalschr.* 1900, pp. 46-53, considers them as *infulae*, or prototypes of the mitre.

ITALY

Santa Maria delle Grazie at Rosciolo.—The church of Santa Maria delle Grazie at Rosciolo, in the Abruzzi, is described by Leader Scott in *Reliq.* 1900, pp. 220-225 (3 photographic figs.). It contains a sculptured chancel-screen, pulpit, and altar, the first dating from 300 to 500 A.D., the altar canopy and the pulpit probably from the twelfth century. They resemble closely the pulpit of Santa Maria Maggiore at Toscanella.

Lombard Architecture in the Marches.—Neither Merzanio in his *Maestri Comacini* nor Bertolotte in his *Maestri Lombardi a Roma* enters upon the study of Lombard architecture in the Marches. The archives of Sanseverino in the Marches are especially valuable for this purpose. No less than sixty-nine names of master masons and architects from Como, Milan, and other Lombard towns, have been recovered from the archives of the fifteenth century by Vittorio Em. Aleandri, and published in the *Arch. Stor. Lomb.* 1900, pp. 322-356.

The Earliest Psalter Illustrations.—Under the title 'Die ältesten Psalterillustrationen,' A. Goldschmidt describes in the *Rep. f. K.* 1900, pp. 265-273, the illustrations in a Psalter classed as Codex I in the Chapter-house library at Verona. The illustrations are of a symbolic, not narrative character, based on Early Christian rather than Byzantine designs.

Coppo di Marcoaldo.—'Coppo di Marcoaldo e Salerno di Coppo Pittori Fiorentini del MCC.' is the title of an article by Peleo Bacci in *L'Arte*, 1900, pp. 32-40. Coppo di Marcoaldo, a little known Florentine artist of the thirteenth century, represented by an interesting Madonna in the Church of the Servi at Siena and by a Crucifix in the Sacristy of the Cathedral at Pistoia, is here studied through the assistance of archives, which mention also the work of his son Salerno.

Duccio di Buoninsegna.—In the *Bull. Senese di Stor. Patr.* Anno V, fasc. I, p. 20, Alessandro Lisini has published important documents concerning Duccio di Buoninsegna. He there gives the year 1285 as the date of Duccio's earliest known work and the year 1313 as the probable year of

his death. In the *Rep. f. K.*, 1900, pp. 313-314, R. Davidsohn publishes a record of his having painted a box to hold parchment volumes in 1278, and a second document from which it may be inferred that he lived until July, 1319.

Frescoes of the Incoronata in Naples.—Bertaux's important volume on Santa Maria di Donna Regina, Naples, 1899, has attracted attention to Sienese painting in Naples in the fourteenth century. On the other hand, the influence of Giotto upon miniature painting in Naples in the same century has been brought out by Graf Erbach before the Kunsthistorische Gesellschaft of Berlin in March, 1900. The frescoes of the Incoronata, attributed wrongly by Vasari to Giotto, are Sienese in character. Paul Schubring in an article entitled 'Die Fresken der Incoronata in Neapel,' published in *Rep. f. K.* 1900, pp. 345-357, attributes them to Paolo di Maestro Neri, the only Sienese who is known to have painted similar subjects and who apparently was absent from Siena from 1349 to 1363, the period to which the frescoes belong.

Sienese Art in Naples.—In *R. Arch.* XXXVI, 1900, pp. 313-321 (pl. v), E. Bertaux describes the old church of Santa Maria di Donna Regina, near the cathedral at Naples, in which is a series of wall paintings representing the Last Judgment, five scenes of the Passion, five scenes of the story of St. Elizabeth of Hungary, and scenes from the lives of Sts. Catherine and Agnes. Portraits of members of the house of Anjou and other persons are introduced. These paintings are seen to be the work of unknown Sienese artists about 1320 to 1332. A portrait in tempera of the Burgundian Humbert d'Ormont, bishop of Naples, 1308-1320, is published. It is a fine work, of the same school as the frescoes. Above the portrait is a picture of St. Paul.

Giottino.—In the *Jb. Preuss. Kunsts.* 1900, pp. 161-177, Paul Schubring writes an article entitled *Giottino*. The list of works ascribed to Giottino by Vasari he finds unreliable. The document from Rome, however, published in the Italian edition of Crowe-Cavalcaselle, II, p. 100, and which he considers of great importance, is of little service in reconstructing the work of this follower of Giotto. For this he is still largely dependent on Vasari.

The Iron Crown at Monza.—The celebrated crown of gold, set with rubies and sapphires, called the Iron Crown because sustained by an iron band said to have been forged from a nail from the cross, has been the subject of much discussion. In the *R. Art Chrét.* 1900, pp. 377-392, under the title 'La Couronne de fer au Trésor de Monza (Lombardie),' Mgr. X. Barbier de Montault upholds the thesis that the crown is neither Gregorian nor Byzantine, but Italian workmanship of the ninth century, and that the iron band was added later after the crown had lost one of the plaques of which it is composed.

The Altar of S. Jacopo at Pistoia.—The history of this remarkable monument of Tuscan mediaeval goldsmith work, in so far as it can be ascertained from existing documents, is given in a small monograph by Gaetano Beani, 'L'Altare di S. Jacopo Apostolo nella Cattedrale di Pistoia.' Pistoia, 1899, 44 pp., 8vo, reviewed by C. v. F. in *Rep. f. K.* 1900, pp. 422-424.

The Enamel Plaque of St. Nicholas of Bari.—In *Mon. Mém. Acad. Insc. (Fondation Piot)* VI, pp. 61-90 (pl. vi; 4 figs.), Émile Bertaux pub-

lishes in colors and discusses the champ-levé enamel plaque in the church of St. Nicholas at Bari. It represents St. Nicholas as protector of King Roger, who is protector of the church. The date is either 1132-1137 or 1139-1154. It is neither Byzantine, Italian, nor German, but belongs to the school of Limoges. In the article various details of the history of St. Nicholas at Bari are established, and numerous works of art are cited in comparison with the plaque.

SPAIN

Proportions of the Cathedral of Toledo. — Aurès, Babin, Henzelmann, Viollet-le-Duc, and others have interested themselves in the question of proportions in architecture. According to Viollet-le-Duc, the Egyptian triangle was employed in the designs of the cathedrals of Paris and Amiens, and the equilateral triangle for the nave of Toulouse and the choir of Notre Dame de Tournai. That this is not mere modern theorizing is shown by a plan of the Cathedral of Toledo, made in 1681 by Simon Garcia and published by Lamperez in the *R. Arch. Bibl. Mus.* (Madrid), 1899, No. 1, also by L. Cloquet in *R. Art Chrét.* 1900, pp. 340-343.

The Cross of Villabertran. — A richly adorned gold crucifix in the romanesque church at Villabertran, in Catalonia, is published by E. Roulin in *Mon. Mém. Acad. Insc.* VI, pp. 201-214 (pl. xix, 15 figs.). It is made of wood covered with gold in which are medallions. The figure of Christ is fixed upon it. Fourteen ancient engraved gems and 109 other stones are set in the gold. The engraved gems represent, for the most part, mythological figures. The crucifix is further adorned with enamel work and engraving. The work belongs to the fourteenth century, 1326-1358. Several similar works are cited, and one at Gironne is published (pl. xx).

FRANCE

Rouen Cathedral. — A general description of the Cathedral of Rouen is given by E. Lambin in the *R. Art Chrét.* 1900, pp. 287-305. As is usual with M. Lambin, the sculptured flora is minutely studied and utilized as a chronological guide.

History of the Cathedral of Noyon. — In the *Bibl. Éc. Chartes*, 1900, pp. 125-172, 282-300, Eugène Lefèvre-Pontalis continues his 'Histoire de la Cathédrale de Laon.' From a very thorough study of the archives he is enabled to publish much detailed information concerning the treasures contained in the cathedral, the various restorations of the cathedral, and its general history up to the present.

The Date of the Portal of St. Trophime at Arles. — The sculptured portal of St. Trophime is shown by a series of arguments drawn from architecture and iconography to be of about the same date as the lateral door of the church of St. Martha at Tarascon (1187-1197) and the church at Maguelonne (1179). It is not improbable that it was begun after the completion, in 1188, of the first gallery of the cloister. (DE LASTEYRIE, C. R. *Acad. Insc.* 1900, p. 147.)

Contribution to the History of Carolingian Sculpture. — In the *Rep. f. K.* 1900, pp. 197-202, W. M. Schmid contributes an article entitled 'Zur Geschichte der Karolingischen Plastik.' The three standard illustrations of the sculpture of this period are the equestrian statuette of Charle-

magne at Paris, the antependium of the high altar of San Ambrogio at Milan, and the Tutilo ivory book cover at St. Gall. To this list Schmid adds the cover of the Codex Aureus in the royal library at Munich, the small ciborium in the Reiche Kapelle at Munich, and the ciborium over the high altar at San Ambrogio, Milan. All of these he cites as French work of the year 835.

Statues of St. Anna, St. Peter, and St. Susanna.—The three statues of St. Anna (with the Virgin as a young girl), St. Peter, and St. Susanna, from the Abbey of Chantelle, now in the Louvre, are published by André Michel in *Mon. Mém. Acad. Insc.* VI, pp. 95–105, pls. viii, ix; 2 figs. The St. Peter and the St. Anna are by the same hand, and are fine works of the school which developed early in the sixteenth century on the banks of the Loire. The St. Susanna is by an artist still under the influence of the northern school.

BELGIUM

The Church of Thourout.—The town of Thourout is one of the oldest in West Flanders. As early as the middle of the seventh century it contained a monastery, which was destroyed at the end of the ninth century by the Normans. The present church dates in part from 1071. Of this eleventh century church the nave was burned in 1578, and reconstructed in 1618–1623, but the tower and western façade remain. Owing to recent restoration this façade now assumes its original primitive and severe character. It is published by B. Bethune in *R. Art Chrét.* 1900, pp. 319–331.

GERMANY

Romanesque Sculpture in Saxony.—In an article entitled 'Die Stilentwicklung der romanischen Skulptur in Sachsen,' in *Jb. Preuss. Kunsts.* 1900, pp. 225–241, A. Goldschmidt distinguishes three phases in the development of Saxon Romanesque sculpture. (1) During the greater part of the twelfth century, poor modelling, expressionless heads, drapery stiff and the folds only superficially indicated. (2) From 1190–1210, heads full of expression and individuality, drapery more deeply carved, with parallel folds and somewhat agitated. (3) From 1220–1230 the highest point of Saxon Romanesque, when draperies appear with powerful, angular, crossing folds most agitated. The influence of Byzantine ivory carvings and of French Gothic sculpture is recognized as factors in the development.

A Reliquary Casket.—In *Mon. Mém. Acad. Insc.* VI, pp. 175–190 (pls. xvi, xvii; 6 figs.), Jean-J. Marquet de Vasselot publishes a reliquary casket in the treasury of the abbey of Quedlinburg, near Halberstadt. The chief parts are carved in ivory and represent the twelve apostles, separated by alternate columns and pilasters. Above them are the signs of the zodiac. These parts are virtually identical with those of the casket from Bamberg, now in Berlin and Munich. They are the work of an artist of the tenth century and were probably made in the Hartz region. The costumes show Byzantine influence. The mounting is of gold with work of the time between 1184 and 1203, being dated by the name of an abbess, Agnes. The bottom of the casket, a plate of silver, has, engraved and in niello, a figure of Christ in majesty, busts of eighteen saints, ornamental columns and arches and inscriptions.

Mediaeval Enamels in the Kestner Museum at Hanover.—In the Kestner Museum at Hanover may be seen an ivory triptych, the central part of which represents a madonna enthroned. This madonna is probably mediaeval, but the entire ivory framework is a fabrication of the last century. Other examples of similar forged ivories may be found in a triptych in the grand ducal art gallery at Karlsruhe and a triptych formerly in the Ruhl collection. In the wings of the Hanoverian triptych are inlaid early enamels representing Sts. Peter, Paul, Vincent, Laurence, and two ecclesiastics, Gerhard, abbot of Siegburg (1174–1183), and Philipp von Heinsberg, archbishop of Cologne (1167–1191). These enamels form the subject of a careful study by Hans Graeven, entitled ‘*Fragmente eines Siegburger Tragaltars im Kestner Museum zu Hannover*,’ published in *Jb. Preuss. Kunsts.* 1900, pp. 75–98.

GREAT BRITAIN

Bronze Bowl from Needham Market, Suffolk.—In *Reliq.* 1900, pp. 242–250 (13 figs.), J. Romilly Allen discusses some objects found near Needham Market more than twenty years ago, which have now disappeared. They are published from old drawings. The chief is a bronze bowl, with zoöomorphic handles. It is adorned with spiral patterns. Similar patterns are discussed. The spiral ornament in manuscripts is derived from the designs of the pagans, and as such designs are not found in Ireland or Scotland, the spirals in manuscripts must be of English origin.

Ecgberht and his Coins.—In *Num. Chron.* (1900, pp. 66–87) H. H. Howarth discusses the reign of Ecgberht, king of Wessex, under the new light to be gained from the study of his coins, which supplement the scanty account of his reign in the *Anglo-Saxon Chronicle*. Mr. Howarth believes that the *Chronicle* is not an original work, but a translation (by Asser, the biographer of Alfred) from a Latin original. His historical conclusions are: “first, that Ecgberht was not a West Saxon by origin or descent at all, but a Kentish prince belonging to the royal house of Kent, and that his accession to the kingdom of the South of England meant the appropriation of Wessex by the royal house of Kent. Secondly, that he was the same Ecgberht who struck coins as king of Kent at the end of the eighth century. Thirdly, that he was very probably the Count Egbert who lived at Charlemagne’s court. And lastly, that the later coinage of Ecgberht did not begin until about the year 825, when he first conquered Kent, and that it continued to be a purely Kent coinage, with Kentish moneyers, Kentish mints, and probably, also, with a circulation limited to Kent, and that we ought not to begin the series of Anglo-Saxon coins of Wessex, at all events, until after his reign.”

RENAISSANCE ART

GENERAL AND MISCELLANEOUS

The Mill and the Wine Press.—In *R. Arch.* XXXVI, 1900, pp. 403–413 (4 pls.; 2 figs.), L. Lindet writes of allegorical representations of the mill and the press. He publishes a window of the cathedral at Bern (not far from 1500 A.D.), one of the Lorenzkirche at Nuremberg, a miniature of the fifteenth century, a painting in the church at Baraille, Pas-de-Calais, by Jean Bellegambe, and an engraving by Gantier. The two windows repre-

sent the mill preparing the bread of the eucharist, the others Christ in the wine press, his blood flowing into the vat. Other similar representations are cited.

Early Illustrated Editions of Vitruvius. — In the *Z. f. Bücherfreunde*, 1900, pp. 49–56, 140–150, Max Bach contributes two articles entitled ‘Die illustrierten Vitruv-Ausgaben des XVI Jahrhunderts.’ The editions to which special attention is given are:

- (1) Venice, 1511. Illustrated by Fra Giocondo.
- (2) Como, 1521. Illustrated by Cesare Cesariano.
- (3) Paris, 1547. Illustrated by Jean Goujon.
- (4) Nuremberg, 1548. Illustrated by Walther Ryff (Gualtherus Rivius).
- (5) Venice, 1556, 1567. Illustrated by Palladio.

The character of the illustrations and their relation to each other are discussed and a few less important later illustrated editions briefly noticed.

ITALY

Donatello's ‘St. Louis’ and the Or San Michele Tabernacle. — The fact that Donatello's St. Louis is now in S. Croce has led various authors to forget that it once stood in the tabernacle on the exterior of Or San Michele, now occupied by Verrocchio's group of the Doubting Thomas. This beautiful Tabernacle has also been assigned by various recent writers to Michelozzo. In the *Jb. Preuss. Kunsts.* 1900, pp. 242–261, C. von Fabriczy writes concerning ‘Donatello's Hl. Ludwig und sein Tabernakel an Or San Michele’ and publishes the original documents bearing on the subject showing that the St. Louis once adorned the exterior of Or San Michele.

Paolo Romano. — Under the title ‘Paolo di Mariano Marmoraro,’ Valentino Leonardi, in *L'Arte*, 1900, pp. 86–106, 259–274, writes concerning the sculptor better known as Paolo Romano. In addition to minor decorative sculptures upon the Arch of Alfonso in Naples, he assigns to Paolo Romano statues of Sts. Peter, Paul, and Andrew, in the sacristy of the Vatican, the St. Paul on the Ponte Sant' Angelo, and a very decorative doorway in San Giacomo degli Spagnuoli in Rome.

Bust of a Christ-child by Antonio Rossellino. — The Museum of Berlin has recently received the bust of a child carved in Florentine sandstone. In the *Jb. Preuss. Kunsts.* 1900, pp. 215–224, Wilhelm Bode characterizes it as a Christ-child and ascribes it to Antonio Rossellino. Other well-known heads of children are also described as representing the Christ-child.

Bernardo Rossellino. — In the *Jb. Preuss. Kunsts.* 1900, pp. 99–113, C. von Fabriczy continues his study entitled ‘Ein Jugendwerk Bernardo Rossellinos und spätere unbeachtete Schöpfungen seines Meissels.’ The present article gives a chronological table of the life and works of Bernardo, documents concerning the façade of the Misericordia at Arezzo, a list of the payments made to him for his work at the Badia at Florence, his taxes for the year 1457, and the contract for the tomb of Beata Villana.

Francesco di Simone. — In *L'Arte*, 1900, pp. 154–155, Giovanni Belleschi extends the study of Francesco di Simone, made by Venturi in *Arch. Stor. Arte*, V, fasc. vi, by adding three pieces of sculpture to the catalogue of his works. One is a ‘ciborietto’ in the Museo Civico at

Bologna, the second is the frieze of a mantelpiece in the Casa Malerbi at Lugo, and the third a Madonna and Child at Solarolo. This Madonna is attributed to Donatello by Argnani, and to a pupil of Antonio Rossellino by Fabriczy.

Landscape Painting in Tuscany.—In the *Jb. d. Kunsth. Samm. d. Allerhöchst. Kaiserhauses*, 1900, pp. 1–90, Wolfgang Kallab writes concerning 'Die toscanische Landschaftsmalerei im XIV und XV Jahrhundert, ihre Entstehung und Entwicklung.' The article considers the treatment of landscape in Roman, Early Christian, and Byzantine Art, and in Italian painting of the thirteenth century as well as Tuscan paintings of the fourteenth and fifteenth centuries. While landscape painting in Tuscany was always subsidiary to figure painting and did not develop the independence it enjoyed in the Venetian and Dutch schools, it is nevertheless of great historic interest for the abundance of examples it presents of the transition from mediaeval and symbolic to modern and realistic treatment.

Flowers upon Altars.—The practice of placing vases of flowers upon altars is not, as M. Didron (*Am. Arch.* XIX, p. 78) asserted, one which always existed, but seems to have originated at the end of the sixteenth century. The practice was at first opposed, then tolerated, and finally became general. In an article entitled 'Fleurs sur les Autels,' in the *R. Art Chrét.* 1900, pp. 336–340, L. de Farcy publishes a series of vases made for this purpose. The earliest are taken from a book entitled *Ornatus Ecclesiasticus*, published at Munich in 1591.

Notes on Venetian Painters.—Pietro Paoletti and Gustav Ludwig have been searching the Venetian archives for notices of painters, and in the *Rep. f. K.* 1900, pp. 173–192, contribute an article entitled 'Neue archivalische Beiträge zur Geschichte der venezianischen Malerei.' This article treats exclusively of the Bastiani family, painters of the fifteenth and early sixteenth centuries. The oldest members were Marco and his brother Lazzaro. Marco's sons, Simone, Alvise, and Paolo, followed in their father's vocation, as did Cristoforo, son of Alvise. Lazzaro also was followed in his trade by his sons Giovanni, Jacopo, and Sebastiano. The connection of Vincenzo Bastiani with this family is indeterminate. Many details and dates for the history of these painters are furnished by the archives. A second article, *ibid.* pp. 274–286, treats of the paintings and mosaics of Lazzaro Bastiani and his school.

Piero della Francesca.—In his recent monograph, *Piero dei Franceschi*, p. 1, Witting speaks of della Francesca as a corruption of the name which correctly written should be dei Franceschi. In the *Rep. f. K.* 1900, pp. 392–394, G. Gronau cites documents to show that both forms occur in fifteenth century records. In the same periodical, pp. 388–391, W. Weisbach contributes an article 'Ein verschollenes Selbstbildnis des Pietro della Francesca,' in which he publishes a letter of Giuseppe Franceschi Marini dated October 24, 1824. The letter mentions a Nativity, now in the National Gallery, and a small portrait of Pietro della Francesca painted by himself. This cannot be the large and later portrait in the Marini palace at Borgo San Sepolero. The whereabouts of this small original portrait is unknown.

The Doni Portraits of Raphael.—A sepulchrum from the Badia and other archives have enabled Robert Davidsohn to recover various dates in the lives of Angelo Doni and his wife Maddalena Strozzi. Angelo was

born in 1476 and died in 1539; his wife died December 20, 1540, being "about fifty years old." In the *Rep. f. K.* 1900, pp. 211-216, Davidsohn shows that the well-known portraits of Doni and his wife in the Pitti Gallery at Florence could not have been painted as early as 1505, as is usually assumed, but were probably painted by Raphael when in Florence in 1515.

Titian's Portrait of Moritz von Sachsen.—The portrait of Moritz von Sachsen mentioned by Distel, *Rep. f. K.* 1899, p. 472, cannot well be more than a copy of the portrait painted by Titian. In the *Rep. f. K.* 1900, pp. 398-399, George Gronau shows that this portrait was carried to Spain by Queen Maria in 1556 and was probably burned in the Prado on the 13th of March, 1608.

The Frescoes in the Casa Prinetti at Milan.—The frescoes in the Casa Prinetti at Milan, representing two Knights, six Arts, and the double herm of Heraclitus and Democritus, are usually ascribed to Bramante. Diego Sant' Ambrogio, in the *Lega Lombarda*, November 7, 1899, shows that they are not so early as the time of Bramante's visit to Milan, but may have been produced by Giovan Francesco Caroto, to whose works they bear a strong resemblance. (C. v. F., *Rep. f. K.* 1900, pp. 343-344.)

Helio Orsi da Novellara.—In *L'Arte*, 1900, pp. 1-31, J. B. Toschi treats of 'Helio Orsi da Novellara Pittore ed Architetto (1511-1587).' The decorative work of this much neglected artist recently attracted the attention of H. Thode in the *Arch. Stor. d. Art.* III, fasc ix-x. Toschi's article is an attempt to give a more rounded conception of the paintings, frescoes, and architectural designs of Helio Orsi, an artist of no great independence, influenced by Correggio, Michelangelo, and Raphael.

Paintings attributed to Correggio in the Munich Gallery.—'Die Bilder von "Correggio" in der Münchener Pinakothek' is the title of an article by W. Schmidt in the *Rep. f. K.* 1900, pp. 395-397. The young Satyr with a flute (No. 1094) he attributes to Palma Vecchio; the madonna in the clouds and St. Jerome, St. James, and the donor below (No. 1096), he ascribes with Morelli to Michelangelo Anselmi; the Madonna and Sts. Ildefonso and Jerome (No. 1095), also with Morelli, to Rondani.

Portraits of Guidobaldo di Montefeltro and of Elizabetta Gonzaga.—In *L'Arte*, 1900, pp. 147-150, Louis Delaruelle assigns reasons why the portrait of Guidobaldo di Montefeltro, in the Pitti gallery, and that of his wife, Elizabetta Gonzaga, in the Uffizi, should be assigned not to Giacomo Francia, but to Francesco Bonsignori.

Dosso Dossi's Jupiter and Virtue.—In the *Jb. Preuss. Kunsts.* 1900, pp. 262-272, Julius Von Schlosser writes concerning 'Jupiter und die Tugend. Ein Gemälde des Dosso Dossi.' The painting representing Jupiter, Mercury, and Virtue in the collection of Count Lanckoronski in Vienna, may now be added to the catalogue of works by Dosso Dossi. The theme was ascribed, inaccurately, to Lucian in Italian literature of the fifteenth century. Another painting by Dosso Dossi, in the gallery at Graz, represents Hercules and the Pygmies. The theme is taken from the *Imagines* of Philostratus.

Two Paintings by Jacopo del Sellaio.—In *R. Arch.* XXXVII, 1900, pp. 300-303 (2 figs.), Miss Mary Logan shows that two paintings among those bequeathed by the late Baroness Nathaniel de Rothschild to the Louvre, described as works of Filippino Lippi and Botticelli, are by Jacopo

del Sellaio, who imitates the painter called by Berenson (*Gaz. B.-A.* June-July, 1899), Amico di Sandro. The first, attributed to Filippino, is a 'Coronation of Esther,' the second is a 'Madonna with angels.' The 'Madonna and Child,' now owned by Mr. Stanley Mortimer, of New York, formerly in the Grandi collection at Milan, is also by Jacopo del Sellaio.

FRANCE

The Statues at Notre Dame de Fouvière.—In the church of Notre Dame de Fouvière are two modern statues of the Madonna and Child, published for the first time by M. Chatelus in *Bull. Hist. Dioc. de Lyon*, 1900, pp. 3-4, 29-32. The earlier, assigned to the end of the sixteenth century, is somewhat Flemish in style and is a more refined and interesting work than the rather rustic *Vièrge noire* of the eighteenth century in the same church. On the bell tower a bronze statue of the Virgin was erected in 1852. It is noticed by M. Chatelus in the *Bull. Hist. Dioc. de Lyon*, 1900, pp. 57-61. The inscription on one side of the base reads with great simplicity

*O Marie, cette ville est à vous;
Protégez-la.*

The charm of this inscription is, however, somewhat impaired by other inscriptions, among them the following:—

*Par la protection de Marie
Lyon a été préservé
Du choléra-morbus
En 1832-1835-1850.*

Bust of a Child.—In *Mon. Mém. Acad. Insc.* VI, pp. 107-114 (pl. x; fig.), Émile Molinier publishes a marble bust of a child, formerly in the Bonnaffé collection, now in the possession of the Marquise Arconati Visconti. It is a fine work of the sixteenth century, possibly by Germain Pilon, and perhaps representing Marie Elisabeth, daughter of Charles IX and Elisabeth of Austria.

NETHERLANDS

Hubert van Eyck.—In an article entitled 'Les frères Van Eyck,' published in *R. Art Chrét.* 1900, pp. 281-286, W. H. James Weale attacks anew the problem of distinguishing the works of Hubert and Jan van Eyck. Besides the design for the altar piece at Ghent, he attributes the following paintings to Hubert: (1) The Fountain of Living Waters, formerly at Palencia, now lost. (2) The Marys at the Sepulchre, Richmond. (3) Calvary, Berlin Museum. (4) The Donor protected by St. Anthony, Copenhagen. (5) St. Francis receiving the Stigmata, New York. Probably also a Madonna and Chancellor Rolin in the Louvre, and a Madonna with Ste. Anne and Herman Steenken de Zuntorp, in the collection of Baron Rothschild, Paris.

GERMANY

Veit Stoss.—'Eine unbeachtete Arbeit des Veit Stoss' is the subject of an article by Berthold Daun in the *Jb. Preuss. Kunsts.* 1900, pp. 185-191. The unobserved work of Veit Stoss, here treated, is to be found in the National Museum of Munich, and consists of six wooden panels from a

series representing the Ten Commandments. The analogies to known works by Veit Stoss are in some cases so evident that it seems strange that this series of panels should have remained in the National Museum without an attribution.

Peter Vischer.—Under the title 'Peter Vischer, Vater und Sohn,' in the *Rep. f. K.* 1900, pp. 299–312, H. Weizsäcker subjects to criticism the recent monograph *Peter Vischer der Jüngere* by Georg Seeger. He finds in general that Seeger draws conclusions from insufficient data.

The Date of Adam Krafft's Stations.—The date of Adam Krafft's Seven Stations is treated by Berthold Daun in the *Rep. f. K.* 1900, pp. 219–221. The date given by Neudörffer as 1508 has no foundation; that of 1493, given by H. Michaelson, is based upon a letter of April 30, 1493, to the effect that the stations were then completely finished and in place. An examination of their stylistic characters and a comparison with the reliefs of the Schreyer Tomb (1490–1492) and the Sakramentshaus in the Lorenzkirche at Nuremberg (1493–1496) shows that the Seven Stations were probably executed in the decade preceding 1490.

Lucas Cranach and His Relation to Sculpture.—That Lucas Cranach not only designed and executed various portrait medallions, but also inspired many works of sculpture, is shown by H. Michaelson in the *Jb. Preuss. Kunsts.* 1900, pp. 271–284. A terra-cotta Madonna and Child in the Berlin Museum is a close copy of a painting by Cranach in the Museum at Darmstadt. The altar of the Johanniskirche in Neustadt an der Orla, the alabaster statues of Johann der Beständige and Friedrich der Weise in the Schlosskirche at Wittenberg, as well as various sculptures at Schloss Hartenfels at Torgau, are to be attributed to the direct inspiration of Lucas Cranach.

Rhenish Painting in the Fifteenth Century.—Henry Thode contributes a second article entitled 'Die Malerei am Mittelrhein im XV Jahrhundert und der Meister der Darmstädter Passionsszenen' to the *Jb. Preuss. Kunsts.* 1900, pp. 113–135. In the painting of the central Rhenish district of the fifteenth century he distinguishes three phases: (1) In paintings dating from 1400–1430 he finds influences from Swabia, Nuremberg, Cologne, and Italy. (2) From 1430–1460 he sees the influence of Stephan Lochner, the Van Eycks, and the Master of Flémalle. (3) From 1460–1510 he finds influences from E. S., Schongauer, the elder Holbein, and Dürer. In this district therefore there was no independent school of painting in the fifteenth century.

An Engraver of the Fifteenth Century.—Under the title 'Der Meister der Berliner Passion,' Max Lehrs in the *Jb. Preuss. Kunsts.* 1900, pp. 135–159, reconstructs the work of a German engraver, who lived probably at Cologne in the latter half of the fifteenth century. From his engravings of the Passion in the Berlin Museum Max Lehrs had already characterized him as 'Der Meister der Berliner Passion' (*Rep. f. K.* 1899, p. 34). In the present article he publishes the results of further study, and lists 115 copperplate engravings which he attributes to this master.

A St. Jerome by Albrecht Dürer.—In the Albertina at Vienna, besides the well-known portrait of the old man, are preserved other drawings of the same date, 1521, representing an arm, a hand, the upper part of a body, a reading desk with books and a skull. Evidently, under the influence of Quentin Massys, Albrecht Dürer had in mind a typical St. Jerome at his

desk, although he may never have executed such a painting. Such at least is the supposition of Wilhelm Suida, who writes 'Ueber eine Darstellung des heiligen Hieronymus von Albrecht Dürer,' in the *Rep. f. K.* 1900, p. 315.

A Drawing by Dürer in the Berlin Museum. — In the *Jb. Preuss. Kunsts.* 1900, pp. 159-160, under the title 'Ein Blatt aus Dürer's Niederländischem Skizzenbuch,' Fr. Lippmann publishes a recent acquisition of the Berlin Museum. It is a silver point drawing by Dürer made in his Sketchbook when at Aachen, October 7-20, 1520. It represents Paul Topler and Martin Pfintzing, two citizens of Nuremberg. The Berlin Museum now possesses four of the drawings from Dürer's Netherland Sketchbook. The same number are at Chantilly, and one each at the British Museum, the Court Library at Vienna, the Academy of Fine Arts, Bremen, and in the collection of Dr. Blasius at Braunschweig.

Bartolomeo Veneto and Albrecht Dürer. — In *L'Arte*, 1900, pp. 155-157, F. Hermann publishes an engraving by Dürer (Bartsch, 131) made in 1500, representing a horseman followed by an armed courier, and observes that Dürer has utilized this very composition in the background of a fine portrait of Bartolomeo Veneto published by Venturi in a recent number of *L'Arte*.



No. 1



No. 2



No. 4

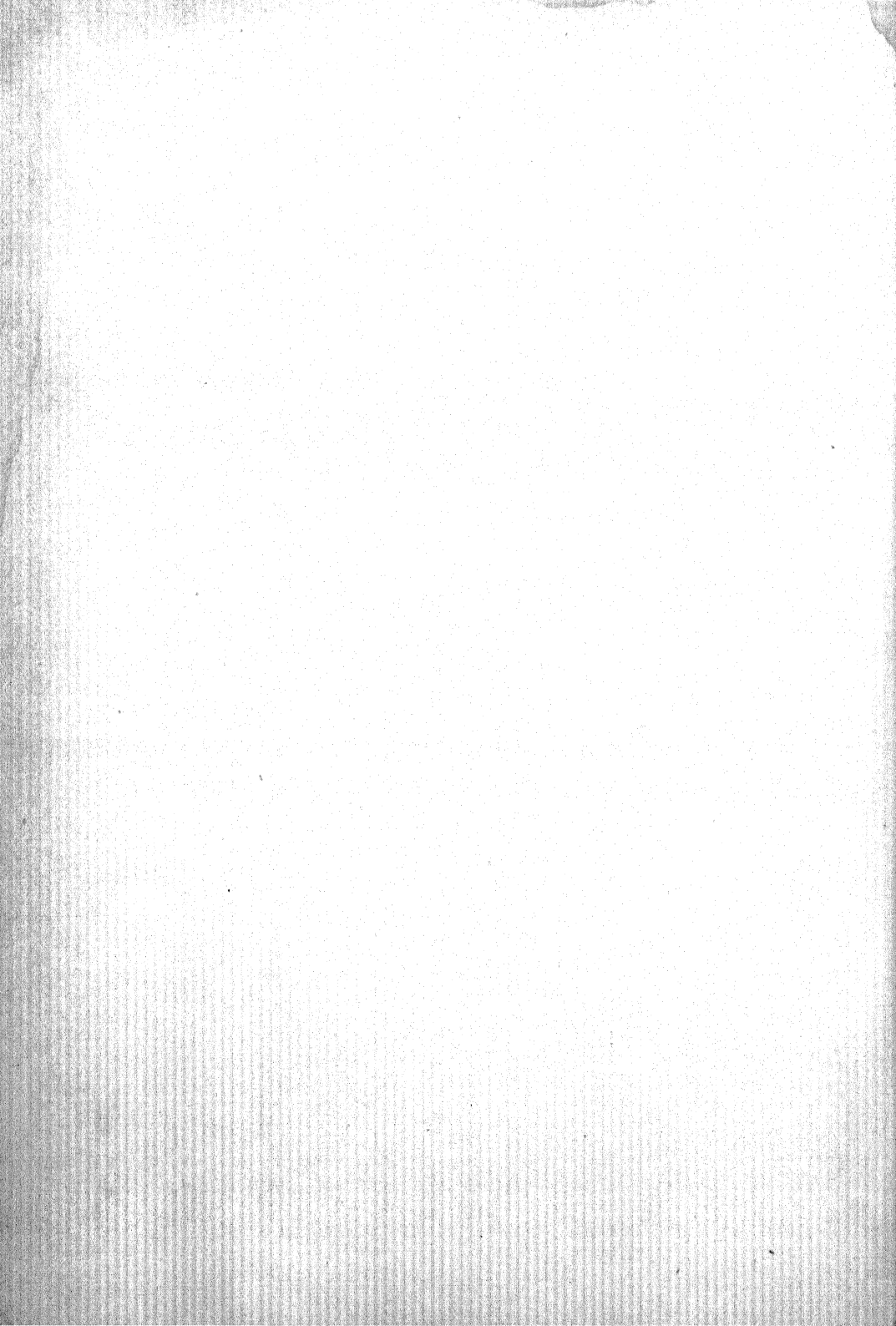


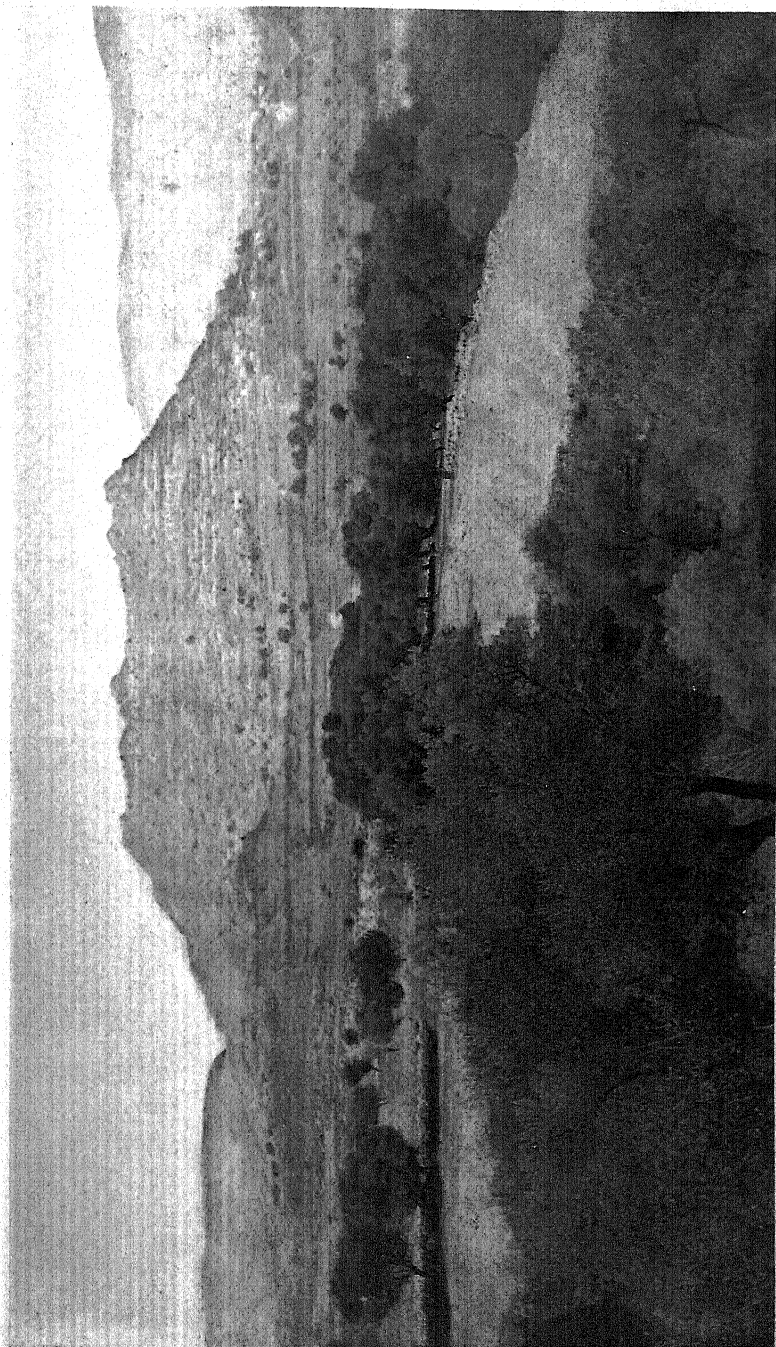
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No. 5

MYCENAEAN VASES FROM THE NECROPOLIS OF ERGANOS

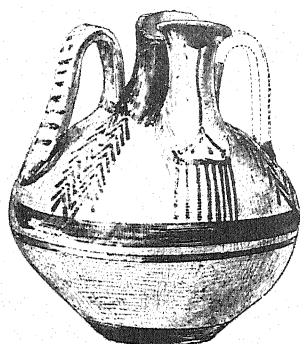




THE HILL OF COURTES (COURTOKEPHALA)



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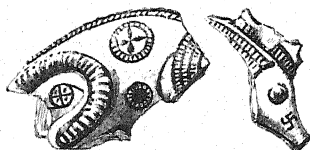
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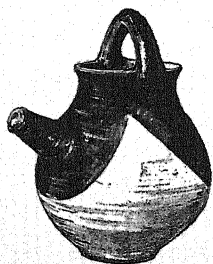
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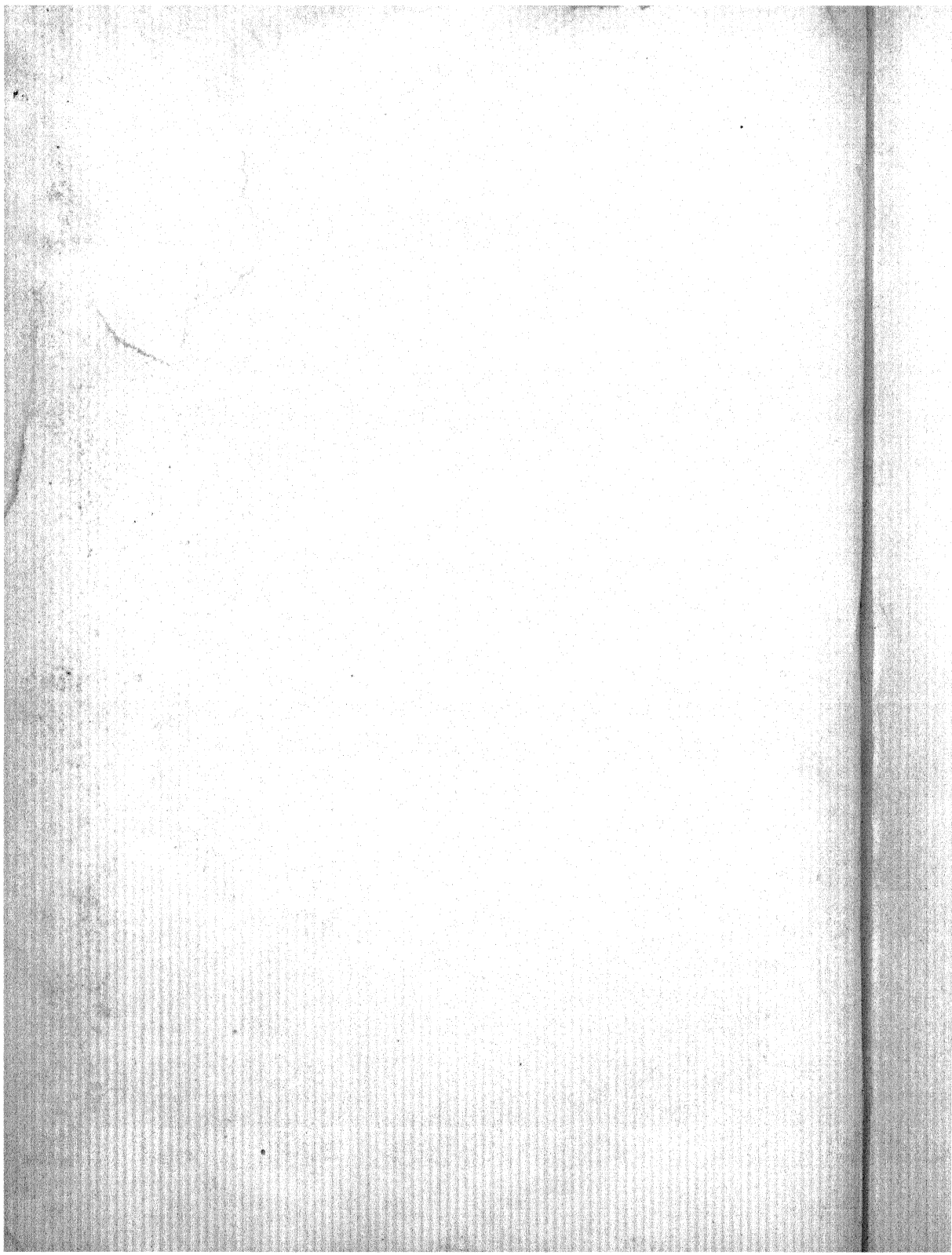


No. 16



No. 17

VASES FROM THE NECROPOLIS OF COURTES



CRETAN EXPEDITION

XI¹

THREE CRETAN NECROPOLEIS: REPORT ON THE RESEARCHES AT ERGANOS, PANAGHIA, AND COURTES

[PLATES VI-IX]

It is more than twenty years since Mr. Minos Calokerinós inaugurated, with his trial excavations in the prehistoric palace of Cnossos, the Mycenaean discoveries on the Cretan soil. Almost at the same time some occasional diggings made near Anopolis in the province of Pediada brought to light the first Cretan vases of the Geometric period. From that day the material of both the classes—although in limited proportions—has been gradually increasing. New finds from Cnossos, Gortyna, Milatos, Anoja, Pendamodi, and other places have enabled the Museum of the Syllogos of Candia to gather a series of specimens which have confirmed what was already in the minds of most of the archaeologists, and which later on the researches of Evans, Mariani, Taramelli, Hazzidaki, and myself have demonstrated,—the exceptional importance of Crete in the Mycenaean age.

But up to these recent years no step had been made toward the systematic exploration of a necropolis, or of a prehistoric settlement; and every attempt at a regular and complete exca-

¹ Continued from Vol. II (1898), p. 94.—The Editors regret that the publication of the concluding articles on the Cretan Expedition has been, through no fault of the authors, so long postponed. It is their intention to issue them all in the present volume or in early numbers of the next volume of the JOURNAL.

vation of the Palace at Cnossos had been frustrated by various causes, chiefly political. Thus, while on the Greek mainland and in the Cyclades, Mycenaean culture went on delineating every day more definitely its characteristics, and the numerous cemeteries of those early days unveiled to us their recondite secrets, in Crete neither a necropolis nor the exact form of a single tomb was yet known, nor the rite of sepulture there in use. All that we knew was limited to the scanty information gathered by me, about ten years ago, as to the hypogaea of Milatos and Anoja, and as to the discovery of the painted urns, the publication of which I entrusted to Professor Orsi in 1890.¹ But the description of those tombs and the plans of them I sketched could but be very imperfect, as they were derived in great measure from the information of peasants of the region, and only in part from the study of the monuments, which at the time of my visit were already transformed by cultivation and almost ruined.

In such a state of things the investigation of the Mycenaean strata seemed to be a duty. And although the political conditions of the island were in 1894 still more difficult than in the past, and it could not be even dreamed to propose to the government a plan for excavations of this kind, it seemed to me nevertheless that at least a first effort in this direction should be made by the Institute at any cost.

In my numerous excursions through the central and eastern provinces of the island, a favorable opportunity for this purpose did not fail to present itself.

I have already stated in the Introductory Report² to the Cretan Expedition that when on a journey in western Messarà, the news reached me that in the vicinity of the Turkish village of Courtes some tombs had been discovered which contained a large quantity of pottery. I hastened to the place, and what was my surprise in seeing that the peasants had come upon a vast necropolis of the Geometric period, which—as well in the form

¹ Orsi, 'Urne funebri Cretesi' in *Mon. Ant.* II, pp. 202 ff.

² *American Journal of Archaeology*, First Series, Vol. XI, p. 531.

of the tombs as in the shape of the vases — was still full of Mycenaean reminiscences! I immediately began to explore the ground, which had been rudely turned upside down by the treasure-seekers, and I prepared my plan for the excavation and study of some of the tombs. In this work I was efficiently aided by Dr. Taramelli. Unfortunately, however, when I succeeded in putting spade in the ground, the peasants' work of destruction was so advanced that I could only collect, as it were, a few scattered fragments of a great shipwreck. This is the reason why the description we are giving of the tombs in this necropolis will, perhaps, be found somewhat meagre. But the vases were nearly all recovered, and they form the first large group of Cretan pottery which can be published with definite knowledge and statements about its discovery.

As this first effort proved to be not entirely satisfactory, I thought it necessary to institute investigations in another place. This other place was found in the southeastern corner of the province of Pediada, on the heights of Erganos. Here also the hand of man had in past years begun its destroying work; but notwithstanding this fact, the necropolis still contained several tombs which had escaped the devastators. Some of these were found by me still intact, the skeletons still there, with all the objects that had been buried with them, in their places. The cemetery of Erganos belongs to the Mycenaean epoch. Upon the hills above the necropolis are yet visible the vestiges of the little prehistoric city, with the remains of a construction which may have been the palace of the chief, and those of a tower or fortress which defended the approaches to the place.

Our researches in these two localities — especially the work at Erganos — have given us secure data as to the form of the tombs and the mode of interment (which is identical with that of the mainland), and permit us suggestive comparisons for the history of primitive Cretan culture.

These data subsequently were in part supplemented by other researches which I made not far from Erganos in the territory below.

To the west of the deep, shell-like valley of Embaros rises a hill of imposing dimensions called Haghios Ilias, at the foot of which are the hamlet of Aphrati and the village of Panaghia, which is the borough of the homonymous *δημος*. Its summit was occupied by a very ancient city, which must have existed in early Mycenaean days, and survived through the classic epoch; but its name has not come down to us. On the extreme western and southern slopes of the hill I came upon some remains of its more ancient necropolis, consisting of several subterranean quadrilateral constructions, all of them pillaged. I cleared up some of them from the earth and stones accumulated within, and amongst these chambers I found one so well preserved that it deserves to be published as a model of a particular form representing the transition between the common domed tomb of the Mycenaean type, and the subterranean chamber of the classical ages.

I divide my report into three chapters, corresponding to the three localities explored, and begin with the discoveries at Erganos, which are the least fragmentary, and represent the most ancient period. To my friend and colleague, Professor L. Mariani, I have left the task of describing the vases which are the product of these researches; whilst another colleague, Dr. G. Sergi, professor of anthropology in the University of Rome, has been so kind as to write for me a note upon the skulls and other human remains discovered in the tombs of Erganos. To both these scholars I express my cordial thanks for their valuable contribution.

I. ERGANOS

IN the province of Pediada there is no other ancient site, after Lyttos, which has so much exercised the popular imagination as Erganos. The traveller who traverses the villages in the centre and south of this district hears almost at every step sayings and proverbs whispering in his ear, which recall the wealth of Erganos and the treasures hidden in her soil. One

says, 'Ακόμη δὲν εὐρέθηκε τὸ Ἐργανὸς τὸ λογάρι; Φτωχὰ περνᾷ ἡ Κρήτη. 'Has not the treasure of Erganos been yet discovered? Oh, poor Crete!' According to another version, the treasure is at Lyttos, whilst at Erganos there is underground an enormous store of oil, the odor of which is smelt in the air by passers-by at the hour of noon. Hence the saying, *Χαρὰ στῇ Κρήτῃ σὰν βρεθῇ τῇ Λύττος τὸ λογάρι καὶ τὸ Ἐργανὸς τὸ λάδι*. 'Rejoicing for Crete when the treasure of Lyttos and the oil of Erganos come to light.'

As far as regards the city of Lyttos, which covers so wide an extent of ground, and has left, together with many ruins, a name in history, it seemed to me very natural that Cretan folklore would have encircled it with such an ornament of traditions and legends. On the contrary, I was surprised to see magnified in like manner a little mountain site of which not even the name had as yet reached the ear of the archaeologist.

But very speedily I became aware that close to this place were visible, at the surface of the ground, some tombs of a very peculiar form, called by the peasants *ξενοτάφια* ('the graves of the strangers'), a very suggestive designation, with which perhaps is also connected the name of Xeniakos, given to the village on the way to them. These tidings, giving shape and form to the vague popular tales already alluded to, decided me to undertake a journey in search of the place. From the monastery of Angarathos, one of my centres during the exploration of Pediada, I changed my quarters to Embaros, a large village about twelve kilometres south of Castelli, and after a cursory exploration of the environs, where remains of the Mycenaean period are not wanting, I set about climbing the steep valley, which from that point penetrates towards the heart of the mountains of Lassithi. The reader will be able to form an idea as to the approximative position of the little known localities of which we shall have to treat, by casting a glance upon the topographical sketch reproduced in Fig. 1.¹

¹ It seems to me superfluous to add that this sketch has no pretence to geographical exactness.

The road issues from Embaros across olive plantations and groves of cedars, mounting gently along the shady banks of the torrent up to Xeniaiko; then with more decided ascent, it pushes on amidst the spurs of the mountains and reaches the little hamlet of Katophygi. Here nature assumes a wilder aspect; the valley draws in and grows winding; the flora of the lower regions is now replaced by a thin Alpine vegetation,

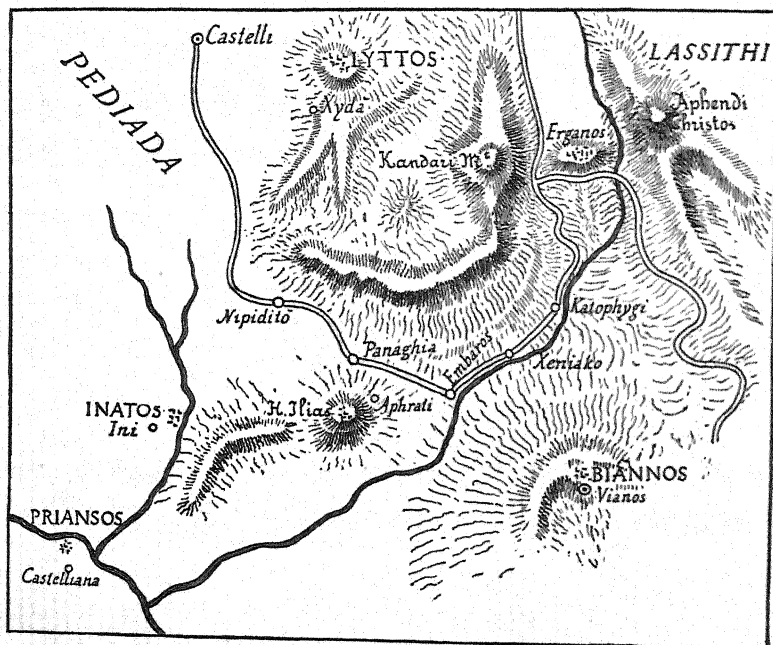
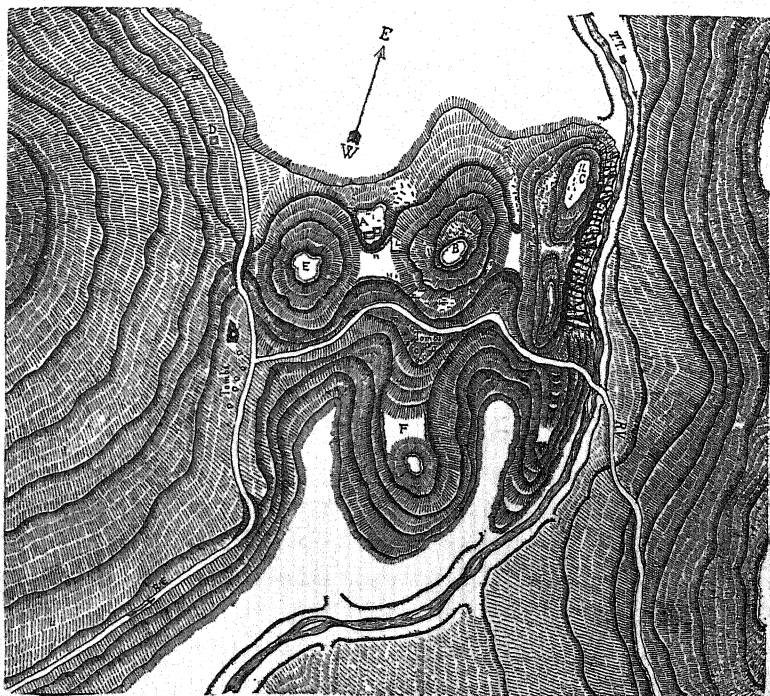


FIGURE 1. — ERGANOS AND VICINITY.

dotting with a few bushes here and there the steep and rocky ground. As far as Katophygi the ascent can be easily accomplished on horseback; further on the road becomes a precipitous mountain path, in some places hardly accessible to mules. It climbs up the cliffs, flanked on the right by the southwestern summits of the Lassithi, and on the left by Mount Candari. The aspect of the scene becomes more severe at every step. The country is utterly deserted; the profound stillness reigning there is scarcely disturbed from time to time by the cry of the

solitary vulture, hovering over our heads as it passes from one peak to another in search of prey.

At about an hour and a half from Embaros the heights of Erganos are reached. As may be seen in the subjoined general plan (Fig. 2), they consist of a knot of four irregular hills, which, after the fashion of a great wall, suddenly barri-



Candari Mt.

Aphendi Christós.

FIGURE 2.—GENERAL PLAN OF ERGANOS.

RE Path from Embaros to Erganos. *RV* Path to Vianos. *TT* Torrent.

cade the valley and divide it from the higher tableland or plain of Erganos. The three hills *B*, *E*, *F*, the last of which is the lowest, have more or less the form of *mamelons*, or rounded and stunted cones, with declivities now gentle, now steep; the summit *C*, on the other hand, is a kind of tall and precipitous peak, which forms, as it were, an advance guard against the upper valley, and seems to regard with envy the colossus of

Mt. Apheni Christós, rearing itself imposingly and almost perpendicularly above its head.

The view from this place is wonderful. All the lower Padiada is beneath our feet; opposite are the hills and vales of the government of Candia, with the great mass of Mount Ida in the background, and to the left the extensive and ample valley of Messarà, which ends in far distance at the sea. I calculate the height of these hills as about a thousand metres, or more, above the sea level.

Between the highest point *C*, and the precipitous declivities of the Apheni, in a deep gorge, the torrent *TT* opens its passage and descends from the upper valley to water the green basin of Embaros, and afterwards to empty itself into the Anapodari at a short distance from Castelliana.

The path which has led us from Embaros, reaching this natural barrier, now bifurcates. One branch (*RE*) continues to ascend, clinging to the slopes of the Candari, and, opening a way for itself in the hollow formed between the latter and the hills, finds an outlet in the plain of Erganos. The other branch (*RV*) crosses the lower part of the hills and the gorge, and, passing to the right side of the valley, runs along the slopes of the Lassithi chain towards the territory of Vianos.

It is along the sides of these two paths that appear here and there the traces of the tombs which I had heard of. Little isolated heaps of stones are accumulated on the ground above many of the tombs in such a way that in some places the whole surface seems sown over with little irregular humps, not always concealed by the grass and shrubs. In other places a slight cavity, hardly distinguishable from the natural irregularities of the slope, marks the site of a tomb formerly rifled. In two places especially the tombs are grouped together in considerable numbers: near an isolated mass of rock on the slopes of the Candari where the path bifurcates, as already said, and on the extreme roots of the central hillock *B*.

Here we have the necropolis of a community of men who in the early Cretan days occupied this eagle's nest. But first,

before lingering to study the city of the dead, let us climb the hills and try to discover whether time has left any traces of the borough or city of the living.

It is enough to ascend some twenty metres above the zone of the tombs to recognize the first signs of an ancient settlement. Fragments of large and rude primitive vessels with fishbone ornaments, pieces of *pithoi*, like those discovered at Cnossos by Mr. Minos Calokerinós, and small bits of painted Mycenaean vases, peep up here and there on the surface of the grounds. They abound particularly in the small hollows and flat spaces which lie between the two principal hills *B* and *C*, as also on the whole northern slope of *C*. This last fact is curious when one observes that the descent from the point *C* is so steep that it is difficult to imagine how it could have once been covered with habitations. But scrambling up to the summit, we set foot upon a limited tract of ground, longish and narrow, levelled in part artificially, with traces of work in the rock and some scanty remains of material apparently belonging to an ancient wall. Here it is evident once rose a building, or perhaps a group of small buildings, from whence come the fragments of terra-cotta which we meet with on the upper half of the ascent. The violent storms which rage during winter in these elevated regions, and the melting of snow in spring, must have denuded the hilltop of every trace of human work, and partly precipitated into the gorge below, partly rolled down the northern slope, all the material once on the hill. Only at its lower part, where the declivity becomes less abrupt in sinking into the hollow which divides it from the brow of the hill *B*, there still appear traces of houses supported by terrace-walls. But the most populous part of this little city was that which had for its centre the mamelon *B*, and especially the little level space between the heights *B* and *E*, as well as both the slopes of *B*, towards the upper valley of Erganos and towards the necropolis.

In this quarter are visible in plenty the remains of walls, and among them the most remarkable are those which belong to the

construction A. The position of this last in a kind of open square, its large proportions, its complex form and the relative care with which its walls are built, cause me to surmise that here we have the remains of the palace, or let us say rather the large house of the chief of the settlement.

The portions remaining above ground of this edifice (Fig. 3), consist of two chambers greatly differing in size, the largest of which is thirteen metres in length and less than three metres wide; both without any apparent vestiges of doors. The main part of the house is perhaps still underground, but the por-

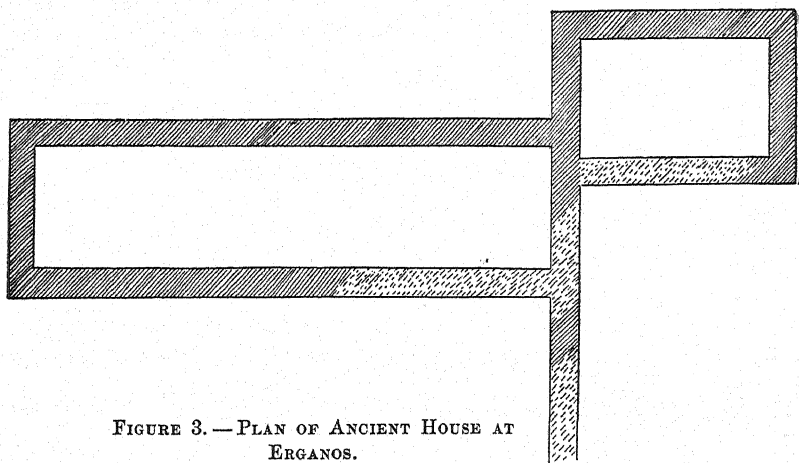


FIGURE 3. — PLAN OF ANCIENT HOUSE AT
ERGANOS.

tion of walls existing can be but insignificant, because here is no accumulation of material which can conceal any building of notable height. The walls visible have an irregular thickness of 0.55–0.65 m. and are composed of rude blocks of moderate size joined together without mortar or cement. They are almost without any foundation, laid upon the ground at little depth below the surface, and are scarcely a metre in height. The upper portion of the construction was doubtless of small unbaked bricks with clayey cement. A trial excavation within the area enclosed by these walls did not bring anything to light except what was sufficient to establish their epoch; such as numerous fragments of the usual *pithoi* and a little

potsherd of a Mycenaean vase painted with ordinary ornamentation.

The summit of *B* as well as the entire hill *E* shows no remains of any kind on the surface.

Another remarkable construction, *D*, is seen below the city at the entrance of the plain of Erganos near the path which skirts the extreme declivity of Mount Candari. This, as is seen in the sketch (Fig. 4), is a rectangle of 10.50 m. long by 6.70 m. broad, constructed without cement like the other buildings, but with stouter walls formed of large natural blocks, some of which only seem to have been roughly squared. The measures of some of them are in length 1.35, 1.45, and 1.60 m.; in breadth 0.60, 0.75, and 0.90 m. The height cannot always be measured, as the upper part only of the walls is above ground. Their thickness varies between 0.85 and 0.90 m.; and consists now of the width of a single block, now of two blocks joined together. From one of the two long sides start traces of an internal partition wall, but they do not reach the opposite side. For the rest, they are so indeterminate that without an excavation it is impossible to be certain whether they really represent the remains of a wall contemporaneous with the others, or are not rather a *τροχαλός* of stones or a common wall of posterior date. It is, however, very probable that a chamber having an area of seventy square metres would have some interior subdivision. Here also, as in the building *A*, every trace of a door is wanting; but I must here remark that not the whole of the surrounding wall is preserved, and we must not forget further that the entrances to constructions of the Mycenaean epoch were frequently at a great height above the level of the ground, and could only be reached by movable wooden ladders.

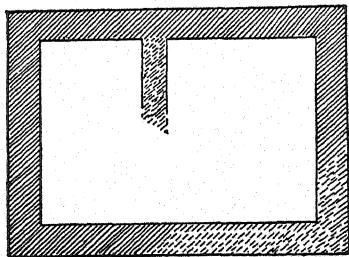


FIGURE 4.—PLAN OF TOWER AT ERGANOS.

And this must have been the case with our building in question, if it was, as seems to me more than probable, a *pyrgos* or other work of defence. This suggested itself to me not only from its form and the solidity of its walls, but especially from its position in front of the pass forming the sole ingress from the lower to the higher valley. On this tableland the dwellers of the prehistoric city had their cornfields and the pastures for their flocks, and it is very natural that they would have endeavored to protect them from the attacks of the inhabitants of the lower valley and of the plain of Pediada. It would seem to me more difficult to admit that this tower could defend the city from incursions from the upper valley of Erganos, as the hills could be reached from the slopes of *B*, which are quite far from the fortress. This is the building which according to the naïve tradition of the peasantry has subterranean cellars full of oil.

In my explorations in the necropolis, I had secured three excavators from Embaros and Xeniakos.

The place of the single tombs, as I have said above, is for the most part easy to recognize from the little heaps of stones visible on the surface of the ground. I could not say whether these heaps are intentional and in accordance with custom, — or whether they were derived from the repeated openings and closings of the various tombs during the time they were in use. The top of these subterranean constructions comes in contact with the pickaxe at a very slight depth — generally about thirty centimetres — below the ground. They are grouped one quite close to the other, but without any established direction, the *stomion* always looking towards the declivity of the mountain, which is what determines the orientation of the tomb. Their form is that of a rude *tholos* (dome) of small proportions, precisely like an oven or a beehive, with a kind of little short tunnel or channel in tetragonal section before the entrance. The *tholos* is built up *à encorbeillement*; that is, in circle upon circle of common unworked stones without mortar, each course overlapping the one below it so as to form a rough vault, which is closed at the top with a single slab. Owing to the irregularity

of the blocks, and of the whole construction in general, the lines of the courses are, however, most of the time interrupted; one stone sometimes occupies the height of two courses, sometimes only half an one.

The more important among the tombs discovered intact is one of the group occupying the lower slope of the hill *B*. It was completely hidden in the soil, and its place was found by taking as a guide the small heap of stones lying above it. The ground here was so compact, and the declivity so steep, that the infiltrating of rainwater and the consequent penetration of

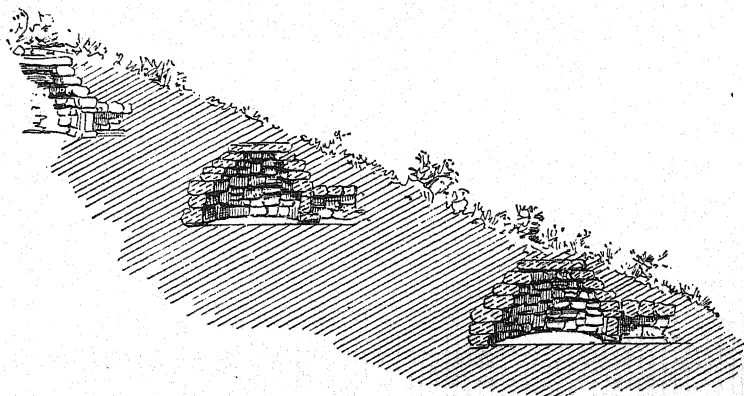


FIGURE 5.—TOMBS AT ERGANOS.

the mould through the fissures of the stones into the *tholos* had been insignificant. The interior of the dome was found almost free from detritus; not even the human remains and the grave-goods were entirely covered by earth. This is the case also in several other tombs examined by me in the necropolis.

In Fig. 6 I give the plan and section of the tomb, the former drawn at the ground-level, and with all the remains it contained reproduced in their places; the second upon the longitudinal diameter, that is to say, upon what passes for the *stomion*, in order to render visible its whole profile. The diameter of the ground-circle is 1.30 m. The vault is only 0.80 m. in clear height; the tunnel or tetragonal channel cor-

responding to the entrance is 0.30 m. wide by about 0.40 m. high, and a little more than 1 m. long.

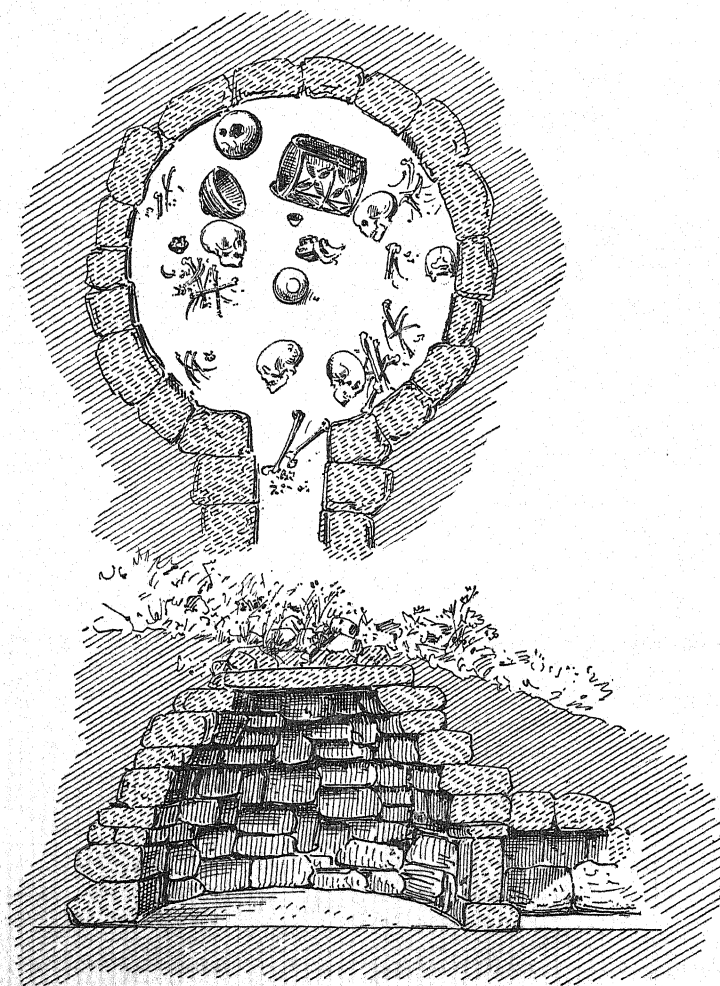


FIGURE 6.—GROUND-PLAN AND ELEVATION OF A TOMB AT ERGANOS.

To excavate this tomb it was found necessary to open it in two places: that is, to disjoin the stones of the tunnel and liberate the *stomion* from what blocked it up, and to remove the large slab which covered the top of the *tholos*. The clearing

out of the material was effected with every precaution and without instruments — working solely with our hands — partly by a workman, partly by myself personally, so that no detail could escape me. The narrowness of the *stomion* being such as not to admit a free passage, we had to lie down on all fours along the direction of the *dromos*, and now one, now another, pushing with great difficulty the head and right arm through the entrance, clear away by degrees the light mould which formed a stratum, scarcely 10 or 15 cm. thick, over the floor of the tomb. Its condition was pretty much that in which it was left soon after the interment of the last bodies. Some of this mould had evidently penetrated into it before the latest burials, because not all the relics of bones and remains of pottery were found placed at the same level.

The bodies here buried were six in number; five of them lay on the floor of the tomb and one was in an ossuary. The skulls were all whole; some in excellent condition, others less perfect; these last on being picked up fell mostly into pieces. As is seen in the drawing, they rested on the ground, now on the right temple, now on the left, another on its face, and they were all near or lying on their respective skeletons, which in general are greatly decayed. The position of the most of the skulls, especially considered in relation to that of the bones, shows it was not the original position; that is to say, that the larger number of the bodies were not laid down with the head resting upon the ground, but that the latter fell in course of time, when by natural decay it became detached from the skeleton. In fact, the lower jaw of one skull lies away from it, and rests upon a false-necked amphora in the centre of the tomb. A similar fact in analogous circumstances has been remarked by Tsountas in a tomb of Mycenae.¹

The bones of the legs are never stretched out, nor could they be so. The circular space of the tomb, which has a diameter of only 1.30 m., would not have been capable of containing in a stretched-out, full-length position even one adult body of

¹ 'Εφημ. 'Αρχ. 1888, p. 132.

middle stature, whereas those deposited in it are five in number. The restricted area besides precludes the idea that all the bodies could have been buried there in a recumbent attitude with the limbs drawn up, and lying either on the right or left side,—as, for example, those in the necropolis of the aeneolithic period lately discovered at Remedello in North Italy.¹ Not even for five bodies lying in this position would there have been room enough; whilst, as can be seen from the drawing, there is even some to spare in the centre of the circle, which is almost entirely free from human remains. It is true we can suppose that in successive burials, when the preceding corpses were already in a state of decomposition, the skeletons would be packed up more closely together to make room for the newcomers, and this really seems to have been done in the case of some skeletons. But from the result of my observations (although the bones—except the thigh bones, the shin and arm bones—are much decayed), it is much more probable that at least the three bodies on the right section of the circle, and perhaps also that one lying alone on the left, must have been placed there seated in the crouching or squatting position around the circular wall of the *tholos*, their backs leaning against it; a position well known in the interments of this and anterior epochs in Greece.² Laid upon the side, but always in a doubled-up position, was instead the corpse whose head is seen just in front of the *dromos*, because his legs protruded from the entrance, with the stone propped over them, with which the *stomion* was closed. But it is not quite impossible that even this body had been also originally in the seated position, and that at a later period the *stomion* being opened for a new burial, this already dried-up skeleton would be pushed partly through the *dromos* to make more room, and the opening closed again with the slab which rests upon his legs.

During one of these later interments a skeleton, probably

¹ *Bull. di Paletnologia Italiana*, Vol. IV, plates ii, iii, iv.

² Cf. for a similar position in the bodies of the Pre-Mycenaean graves at Corinth described by Heermance and Lord, this JOURNAL, Vol. I (1897), pp. 313 ff.

that of the head of the family or some other distinguished person,—or perhaps simply the remains of the individual first buried there,—was collected in an ossuary. This is the large vessel which we see in the upper portion of the circle, near the skull lying with the right temple on the ground. It had originally a hemispheric lid, and was placed upright in the tomb. But probably the fall of the neighboring skeleton turned the ossuary over in the direction shown by the drawing, and thus the lid fell off upon the skull to the left.

The ossuary is reproduced, together with almost all the other vases discovered in this tomb in our PLATE VI, No. 4. It is of cylindrical form, slightly swelling out all round in the upper part; it has a height of 0.27 m., and a diameter of 0.255 m. in the middle, and of 0.20 m. at the mouth, which is surrounded by an upright lip, or rim, round which the lid fits. The height of the cover, without calculating the handle, is 0.095 m. The ornamentation of the vase is partly preserved, but somewhat faded, partly much effaced and scarcely distinguishable. Our drawing represents the best preserved side; the traces visible on the surface of the opposite side seem to point to an identical or very similar ornament. It consists of two series, one upper and one lower, of squares or checkers, filled now with a four-petalled rose, recalling the floral decorations on a portion of the Mycenaean urn of Milatos,¹—now with a bunch of broken or zigzag lines, the whole painted in dull brown tint, finely coming out upon the light color of the ground. The two decorated sides are divided from each other by the two bands corresponding with the arching of the handles, in which bands we recognize simple ornaments, much faded, in thin, curved, concentric lines, like those in some of the urns of Anoja.² The lid is painted in simple concentric circles.

Not the whole skeleton, however, was deposited in this receptacle, which would, indeed, have been too small to hold all the bones. It contained the skull of an adult (the lower jaw had

¹ Orsi, 'Urne funebri Cretesi,' *Mon. Ant. I.*, p. 209.

² *Ibid.* pp. 205–208.

three large molars on either side), with fragments of other bones, perhaps broken purposely to get them in. As the large femoral bones and the tibiae were wanting, I must suppose that the remains of the torso only had been put into the jar.

The accompanying objects in the grave consisted of five vases, scattered upon the ground here and there, and certainly not deposited at the same time and all together, but on occasion of different burials. To what interment may belong and correspond each one of them, it is impossible to ascertain. Most of them must have been moved about during the time the *tholos* was in use, and they were probably also displaced in consequence of the decomposition and falling over of the seated skeletons. The cup we see in the centre of the tomb is turned upside down; some are also more or less broken, but from the position of the fragments, gathered together in heaps, it does not seem that they were smashed intentionally from ritual motives, as was perhaps the case with a vase in the tomb which we shall next describe. They are four false-necked amphorae of various dimensions, all ornamented, one of them in so many bits it was impossible to reproduce it in the plate, besides a small unpainted phiale, or deep plate. This is the little vase seen in the plan of the tomb, lying between the ossuary and the larger vase upon which the jawbone is resting, and in our PLATE VI, No. 5. Several broken pieces of the other vases which could be fitted together were glued into their proper places, and it is in this condition that the vases are presented to us in the drawing of M. Gillièron in PLATE VI.

The largest is the false-necked amphora, No. 1. It has a height of 0.182 m. The ornaments, much faded, occupy the upper part of its body, upon a band of two broad and two narrow concentric lines; their elements are, as we see, the waving or spiral lines and the groups of small lines disposed now like palm leaves, now without any certain purpose.

Then follows another false-necked amphora (No. 2), the best preserved of all: height, 0.125 m.; greatest diameter, 0.133 m. The decorative elements here are also the waved band, the

spiral lines, and under the spout the filling up of small concentric arches. The painting is opaque, or dull, and the color is almost the same dark brown as on the ossuary.

Another false-necked amphora (No. 3) is somewhat smaller, and almost squashed or flattened in form: height, 0.10 m.; greatest diameter, 0.125 m. It is ornamented with concentric lines and rows of little arches like lace edgings. The color of the ornament is red, on a light ground; and the painting, though faded, presents some traces of lustrous varnish foreign to the preceding vases.

The fourth vase is also a false-necked amphora, but being wholly in fragments, and having the surface much defaced, we cannot see whether or how it was ornamented, nor what could have been its exact proportions. Its approximative measures would be 0.07 m. diameter and 0.075 m. height. It was thus much smaller than the preceding vases. It is the only object discovered in the tomb not represented in our plate.

The reader who has followed me in these notes descriptive of the tomb will probably have asked this question: How did the inhabitants of this settlement manage to get their dead into these subterraneous cells, the *dromoi* of which are represented by a low and narrow tunnel corresponding to a *stomion* of thirty or at the most fifty-eight centimetres wide? That this tunnel and this *stomion* were opened at each interment appears to me clear from the above-mentioned fact, that there was a skeleton found with the legs under the stone of the entrance. But to me it is equally clear that besides the *stomion*, it was necessary to uncover also the roof of the *tholos*, by raising the large slab we have seen on the top, and perhaps also the upper row of stones round the vault. The corpse was let down through this opening, and a person entering the *tholos* must have placed it seated where there was room for it; and if there was not, he would clear a place by packing more closely together the other more or less decayed inmates of the tomb. To introduce the body in the squatting position it was to maintain in the grave, I should suppose the limbs must previously have been bent up, bound, and

swathed together soon after death, before the corpse had time to stiffen. And who knows that the Cretans did not practise the custom of the African Nasamones, as described by Herodotus (IV, 190), a custom which Dr. Tsountas has very opportunely recalled¹ on occasion of his recent important discoveries in the prehistoric necropolis of Amorgos? What is here quite indubitable is the fact that, as generally in the Mycenaean necropolises of Greece, cremation was not practised. None of the bones I found and examined in this tomb, nor those in the ossuary, — nor any human remains found by me in the other *tholoi*, — present signs of combustion.

No trace of metal was found either in this or in the other tombs by me explored at Erganos, and the supply of grave gear itself is very modest.

In the next tomb (Fig. 7) these are almost utterly wanting. This one, although not very far from the other, has suffered rather from the filtering in of water, with consequently a larger penetration of mould. The clear height of the *tholos* is about 1 m.; the accumulation of earth rose to about 0.40 m. from the ceiling. But here also the penetration of the mould must have taken place for the most part during the period of the use of the tomb, and before the last burial. In fact, the first relics of bones discovered came to light almost at the surface of the filling-up material. Together with these remains were the broken

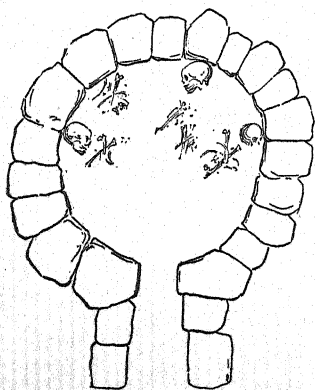


FIGURE 7. — TOMB AT ERGANOS.

pieces of a small saucer without ornaments, perhaps broken purposely as part of the funeral rite. The skeletons of this tomb are three; but they are in such a state of decay that, excepting some portions of the skulls and the leg bones, still very hard, all are reduced to dust. Nevertheless, the position

¹ Εφ. μ. Ἀρχ., 1898, p. 147.

of the skulls, all three against the wall beside the bones of their respective bodies—all collected together—shows us that here also the bodies were deposited in the crouched-up position, seated with their backs to the wall, rather than reclining on the side. The proportions of this chamber are somewhat larger than the other, not only in the height of the vault, but also as to the diameter, which is 1.70 m. Upon the floor of the tomb we find a sort of pavement of rude slabs, as in other known (not Cretan) tombs, which served as a couch for the bodies. Remarkable is the form of the channel or tunnel which widens toward the outside, having here an opening of 0.50 m., while at the *stomion* it is only 0.35 m. Its height is 0.65 m., the length scarcely 1.30 m.

The largest of the tombs explored by me is constructed of very large blocks, and measures a diameter of 1.90 m., an entrance 0.58 m. wide, and 0.75 m. high, and a tunnel 1.40 m. in length. The top of the *tholos* had been removed, and the chamber appears to have been plundered. The actual height of the first course of stones preserved is 1.15 m. from the bottom; the clear height of the vault may have been 1.25 m. or 1.30 m.

All these tombs were evidently family burying-places of the common people. They have nothing in common with the great *tholoi* of continental Greece, and not even with those more modest sepulchres excavated in the soft rock of Anoja in Crete itself, except the form. That this form is ritualistic, or at least traditional, and not in all its particulars depending upon the exigencies and customs of the time, seems to me confirmed by the characteristics of the *stomion* and the tunnel, which is only a variety of the common *dromos*. Whilst originally the *stomion* is the door of the tomb, and the *dromos* the vestibule leading into it, here the *stomion* and the *dromos* as well, are useless, unserviceable accessories, their proportions not lending themselves to the passage of a body either living or dead. They represent the crystallization of two ancient elements; they are atrophied members, one of which, the *dromos*, as we

shall see in the tombs of Panaghia and Courtes, is eliminated and disappears in later times.

I do not know, and rather doubt, whether the family tombs of the chiefs may have been of form and proportions any more developed than these humbler resting-places. From the tales of the peasants, the exactness of which I could not verify, I gathered that in tombs plundered by them many years previously were found golden objects, and one might well believe that such burying-places would be those of the 'lords of the soil.' But nothing has been related to me from which it would appear that these differed sensibly in size and form from the tombs I excavated.

The whole impression made by the ruins of Erganos and the remains of its necropolis is certainly that of a settlement of mediocre importance, a large village of shepherds and hunters; perhaps also the eyry of a bold population of brigands who may have harried the lower settlements around them. Folk-lore has exaggerated the importance of the place; but it is quite explicable how the popular imagination would be struck, at the sight of those works of men's hands and those *tholoi* filled with skeletons amid the lonely cliffs and rocks of the lofty mountain.

To enter into speculations as to the nationality of the people of Erganos would seem to me labor in vain. The thorough exploration of the Cretan prehistoric and proto-historic strata is scarcely begun with these first essays of the American Institute; and it will be only in the course of some years that the soil of the island will offer us contributions of a definitive character toward the solution of so many problems relative to the period in question. Wishing, however, that the data, however slight, might be taken into account, which the human remains of these tombs can offer for the study of the subject, I have requested the well-known anthropologist, Professor Sergi, to examine the best preserved amongst the skulls and other bones collected by me in the excavation, and to communicate his remarks to this JOURNAL. The reader will find them in one of the articles which are appended to this report (pp. 315-318).

Nor will I linger to discuss the etymology of the name Erganos, of no doubtful ancient origin, given to this locality, an inquiry as to which every basis would be wanting to us. Instead of this I invite those who have accompanied me up these savage heights, to return down through the valley into the green recesses of the basin of Embaros, and upon the gentler hills in its vicinity, to search for other remains of the civilization with which we are occupied.

II. EMBAROS AND NIPIDITO; TOMBS NEAR PANAGHIA

THE southeast corner of the province of Pediada, as I have already had occasion to mention, must have been densely inhabited in the early Cretan days.

The whole country of Embaros is sown with ancient remains. On the little *plateau* called *ὁ δρᾶος*, beyond the torrent, rise up here and there mounds of large stones, certainly proceeding from ruined buildings, whilst the surface of the ground is entirely covered with fragments of jars and other vessels, resembling in part those of Erganos and those of Galanà Charakia in the district of Sitia,¹—but partly of a much later epoch. Another ancient settlement was found in the locality called Πατέλα, where also abound just on the surface fragments of Mycenaean pottery; and a third (at the southwest extremity of the village), in the fields of Haghios Petros, — so called from a church dedicated to this saint, now half ruined. The descriptions, however, I have had from the peasants, of edifices there discovered and now no longer visible, do not lead me to think that this last place was of the epoch in question. The prehistoric traces of this territory have been for the most part obliterated by the villages, the farms, and the villas of the Roman epoch, during which the district of Embaros seems to have been quite as populous as in the times preceding the classic period. Of the Roman epoch are also all the inscriptions which so far we have of Embaros, Xeniakó, and Nipidito, and which were published

¹ See *Antiquary*, XXV (1892), p. 155.

in the "Cretan Number" of the first series of this JOURNAL (Vol. XI [1896], pp. 559 ff.).

Among the fragments of early terra-cotta examined by me in these localities none have such distinctive characters of ornamentation as to be worth reproducing or studying separately. I present here instead the slightly enlarged reproduction of a pendant (Fig. 8) of steatite found at Embaros, which was evidently an amulet, and by its characteristics might even belong to the linear series of Evans. But as will be seen in an article to follow, where I shall speak of steatites and other engraved stones I collected in Crete, it is very difficult in some cases to

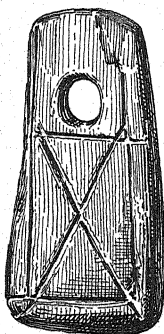


FIGURE 8.—STEATITE PENDANT
FROM EMBAROS.

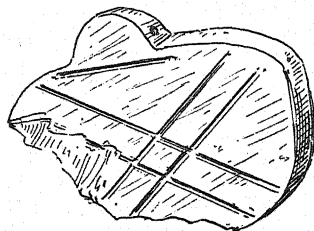


FIGURE 9.—CORNELIAN PENDANT FROM
EMBAROS.

decide whether an object bearing such and such linear marks may be prehistoric or of quite a different date. From the environs of Embaros also comes probably the cornelian pendant (Fig. 9¹), shown me by a peasant of the place. It had originally a form almost discoidal or more properly oval, with a little perforated projection to suspend it on a chain, and it bears on one of the faces a linear mark now fragmentary.

But the two most remarkable pieces I collected on this excursion are two vases of dark steatite, found by the peasants at Nipidito, which I give in Fig. 10. They are two new and very handsome specimens to be added to the now considerable group

¹ This also is a little enlarged in the reproduction.

of Cretan stone vessels made known to us by Mr. Evans in one of his studies upon the Pre-Hellenic antiquities of the island.¹ Not having anything to add to what he has already said about these art productions, which were so much in vogue in Pre-Mycenaean and Mycenaean Crete, I merely limit myself to pointing out the examples of Nipidito as a proof of the extreme antiquity of the settlements of the place.

The early population of this district did not live merely gathered into villages or scattered through the country, but they had also their own city. This occupied the majestic summit of Haghios Ilias, which rears itself between Embaros and Nipidito to a height of about 250 m. above the southern plain

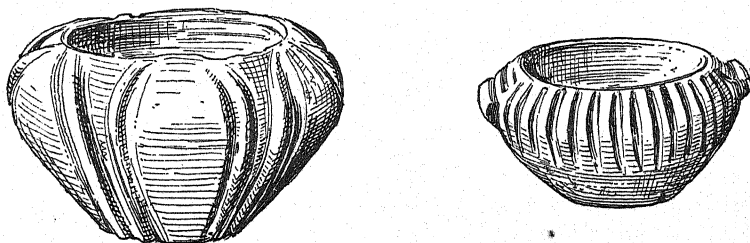


FIGURE 10. — STEATITE VASES FROM EMBAROS.

of Pediada. I postpone for a special article the description of its remains and that of the ancient objects found among them, because not all belong to the epoch with which the present article is occupied. Here I shall delay only to collect the contributions to the study of early Cretan necropoleis afforded us by some tombs in the neighborhood, which I believe may belong to one of its cemeteries.

The western slope of Mount Haghios Ilias descends gradually, in a series of small mamelons and lesser declines, into the plain of Ini.

It is on one of these little hills, called 'ς τοῦ κοφινᾶ τὸ κεφάλι, in close proximity to the modern village of Panaghia, that a few years ago was discovered a group of tombs; but as

¹ Arthur J. Evans, *Cretan Pictographs*, etc., London, 1895, pp. 116-124.

usual these were immediately plundered by the peasants. Their construction, however, was so substantial that the ravagers only succeeded in uncovering them and emptying out the contents, but not in destroying their walls. Although I could not have the hope of finding anything in these rifled hypogaea, nevertheless it seemed to me worth the trouble to clear one or two of them out, to ascertain their exact form. I chose two tombs near each other, but emptied only one completely, because the other, while showing itself identical as to plan and construction,

was not in the same good state of preservation.

Although maintaining the system of construction *à encorbeillement* which we find in the tombs of Erganos, and the same disposition of the openings,—that is, a *stomion* in the wall and a hole covered with one or two slabs at the top,—the tombs of Panaghia differ, however, from those already described in the form of the chamber, which, in place of being

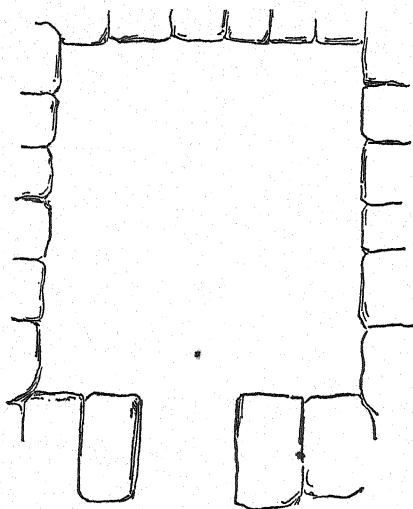


FIGURE 11.—TOMB AT PANAGHIA:
GROUND-PLAN.

on a circular plan and domed, is rectangular, with four lateral walls. But these four sides preserve in themselves the primitive *tholos* character, inasmuch as they incline inward so as to form a truncated hip-roof.

The subjoined cuts (Figures 11 and 12) reproduce the plan and longitudinal section of the tomb that was cleared out. The chamber measures 1.90 m. by 1.65 m. The clear height is 1.25 m.

The entrance looks toward the west, probably because the tomb is on the western slope of the hill, although not precisely

on the line of the declivity, but rather farther back, set in a kind of small plateau.

The hole formed by the interior edges of the last upper course of stones measures at the widest part 0.65 m. The *stomion* is 0.60 m. wide, and 0.70 m. high. Its proportions are therefore somewhat more considerable than in the tombs of Erganos; and here it is a little more difficult to decide whether the bodies were lowered through the opening above or borne through the *stomion*,—so much the more as we have no clew whatever as to the rite of sepulture in this necropolis, none of

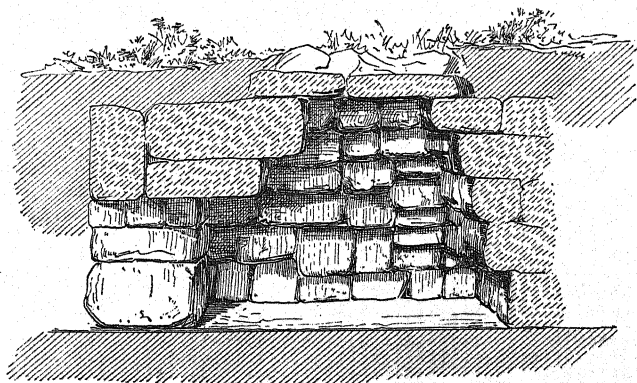


FIGURE 12. — TOMB AT PANAGHIA: SECTION.

the peasants having given me any indication as to the position of the skeletons. The dimensions of the chamber would have lent themselves to the placing of the bodies at full length; I think, however, that the custom of the crouched-up position prevailed also here.

Another peculiarity of the Panaghia hypogaeum is the absence of the tunnel, or *dromos*, which is here only represented by the thickness of the front wall. A huge mass of irregular form, but with the lower side blocked into a straight line, serves for architrave of the *stomion*. I present in Fig. 13, from a photograph taken during my excavation, the exterior view of the tomb, showing the entrance and the opening at the

top after the removal of the two slabs which originally covered it and which had been partly displaced in the previous excavations of the peasants. To restore the ancient aspect of the



FIGURE 13. — TOMB AT PANAGHIA : EXTERIOR.

tomb, we must imagine the *stomion* closed up with one or more stones of large size, the two slabs replaced upon the top, as in the view of the section given above, and the whole covered up with earth, with perhaps a small heap of stones over the mound to mark the place.

I was not able to obtain any account as to the contents of this sepulchral chamber from the people of the place. The

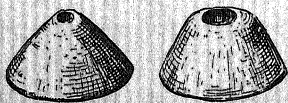


FIGURE 14. — WHORLS.

only two small objects forgotten by the first excavators and found by me were a finger ring of plain bronze wire in a fragmentary state, and a little whorl of stone of the same form as the two coming from the same territory, which I reproduce here (Fig. 14), and which are common all over the island.

That we find ourselves also here in the same circle of culture represented by the necropolis of Erganos seems to me evident; but the tomb of Panaghia belongs to the extreme limits of this period. Its squared chamber, derived from the *tholos*, constitutes already the type of transition between the early 'beehive' tomb and the common sepulchral hypogaeum of Hellenic times.

III. THE NECROPOLIS OF COURTES

THE last necropolis of which we have to speak is that of Courtes. This is in another province of the island, in the region of the southeast slopes of Mount Ida, within the complex knot of hills which form the northern borders of the lower Messarà, not far from the great city of Gortyna.

The city to which this cemetery belonged must have seen at least the dawn of historic times, but its ruins have almost totally disappeared, and its name, struck by the same fate as those of the settlements above described, is lost to us.

The sketch of a topographical plan which I here present (Fig. 15) will suffice to give an idea of the situation of the necropolis and of the little which remains of the ruins (RR) of the city.

The hill upon whose slopes the latter rose is called Courtokephala, or Placoura, or even τοῦ Φράγκου ἡ καθέδρα, the 'seat of the Frank,' a sign that also about this place, as around Erganos, Cretan folklore had embroidered its fanciful tales. Its form is so characteristic that, although my photograph of it has greatly suffered, I cannot refrain from reproducing it in PLATE VII. Space for buildings or bulwarks upon the sharp crest which ought to represent the acropolis, there is none. The western point alone above the necropolis bears a few traces of work in the rock.

I have already alluded, in the introductory pages of the present article, to the considerable share Dr. Taramelli had in the exploration of this necropolis. Almost all the work, after my attempt at excavation, including the study of the tombs

devastated by the peasants, is due to him. I shall, therefore, in this part of my report, limit myself merely to making a few observations on the tombs I had begun to clear out in the few hours of excavation I could accomplish by eluding the vigilance of the Turkish authorities of Myres, and upon some very important fragments found by me on the ground. All the rest, with an accurate description of the locality and attempts at restoring

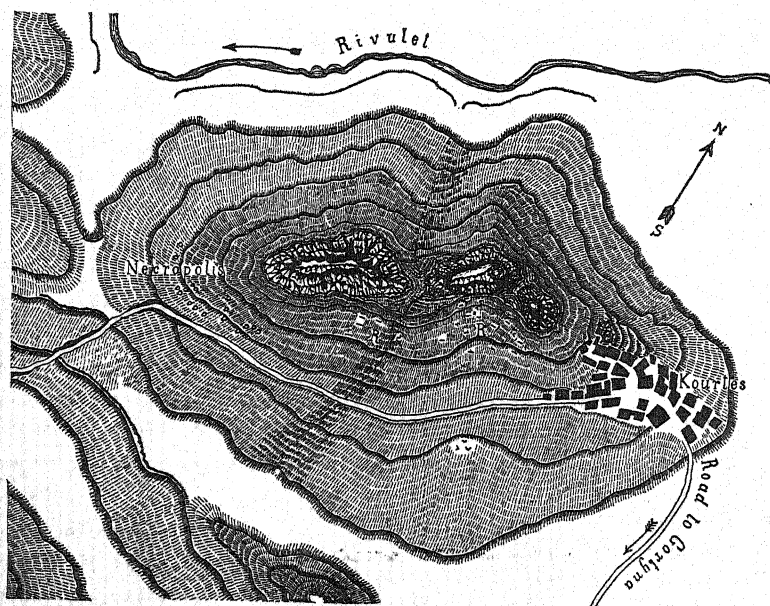


FIGURE 15. — COURTES AND VICINITY.

some of the tombs, will be found in Dr. Taramelli's 'Notes' (pp. 294 ff.). We had desired to give more unity to the exposition of our work at Courtes, and we should have done so if our plan of a systematic exploration of a portion of this necropolis had not been thwarted by Turkish obstruction. But, as has been stated, this work was executed in fits and starts, amidst enormous difficulties, and in various successive excursions, the last of which was made by Dr. Taramelli. In this state of things, instead of combining our results, it seemed


preferable to exhibit them in a form which leaves to each of us the responsibility of his own observations.

The necropolis of Courtes presents the type of a period of transition. As well in the form of the tombs as in the form of several of its vases, Mycenaean characteristics are present. The *tholos*, more or less changed in form, continues to be, at least as to the interior, the structure which is shown by all the sepulchral chambers, but the plan of these becomes less fixed: the builder uses greater freedom; the perfect circle gives place to several varieties, which we may sum up in the horseshoe shape or in the highly varying shape of the Greek *omega* deprived, however, of the two projections at the base (Ω). The only type still wanting in the hypogaea seen by me at Courtes is that of the square plan found at Panaghia. We have instead, in one instance, a curious transformation of the common *tholos* into a kind of cylinder.

The ornamentation of the vases, although equally preserving Mycenaean reminiscences, is decidedly of Geometrical character; and of all the small fragments or objects of other material found by me in the upturned ground, or seen in the hands of the Courtes peasants, only the following seal of steatite (Fig. 16) seems to belong to the Mycenaean period and the linear series of Evans, although some one might also see in the sign it bears a Greek K of the epoch of the Pythion inscriptions. And that the people who buried their dead in these tombs must



FIGURE 16. — STEATITE SEAL FROM COURTES.

have been already in possession of the signs of Greek writing, is clearly proved from this  little fragment picked up by me near a tomb, in which any one will recognize a Π and a P in retrograde direction, or else a Π and a T of a form exactly that of the alphabet of the Pythion inscriptions. Besides this fragment of inscription was a portion of a slab (Fig. 17), with a cornice in relief and ornaments of Geometrical zigzag lines.

Metal is very scantily represented, but along with some

fragments of bronze *fibulae* in the shape of a simple arch, and hairpins with plain ornaments of *bullae*, appears iron in pretty

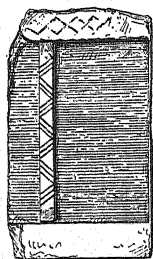


FIGURE 17. — SLAB
FROM COURTES.

numerous lance-heads, unfortunately very fragmentary and much corroded by oxidation. Besides these objects, which, together with the vases, are now in the *Syllogos* at Candia, I have seen nothing else except bits of whetstone, with holes and flutings, for what use is to me quite inexplicable.

Of the nature of the burial here, my imperfect researches give me little to detail; but besides inhumation, which seems to have continued, it seems we may be certain that also cremation had come into practice here as in the other necropoleis of the Cretan Geometric period.

The three tombs I had tried to clear out are at a short distance the one from the other, near the path which skirts the necropolis. Each of them is of a different form, and entrance here also, as everywhere else, looks toward the line of the slope.

The first (Fig. 18) seen from the exterior presents the form of a half ellipse; its interior plan, however, is that of a length-

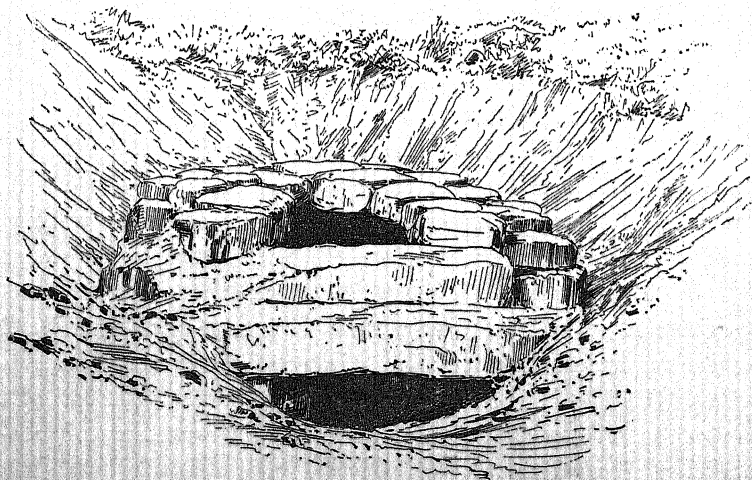


FIGURE 18. — TOMB AT COURTES (cf. Fig. 19).

ened *omega* (Fig. 19). The curved walls are built of irregular courses of stone à *encorbeillement*, constituting a rude *tholos* truncated by the slabs which formed the covering. The front aperture is surmounted by two long stones which made a kind of architrave in a fashion little dissimilar to that of the tomb of Panaghia. The area of the chamber is smaller than that of the tombs of Erganos; the clear height is about 1.50–1.75 m.

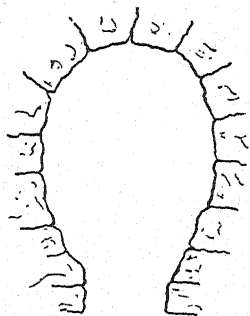


FIGURE 19. — GROUND-PLAN
OF TOMB AT COURTES
(cf. Fig. 18).

The second (Fig. 20), almost completely dismantled, only retained the lower courses of the walls, sufficient, however, to show that also here the stones of the series overlapped so as to constitute a rude vaulting. The plan is that of a somewhat lengthened horseshoe with a longitudinal diameter of 1.55 m. and an oblique one of 0.83 m. The thickness of the wall is only from 0.36–0.38 m.

The third, finally (Fig. 21), is nearly in the form of a cylinder, in which, however, the upper courses slightly contract so as to indicate a vaulted roof. It is the smallest of all, scarcely reaching one metre in diameter. This is the tomb within which I

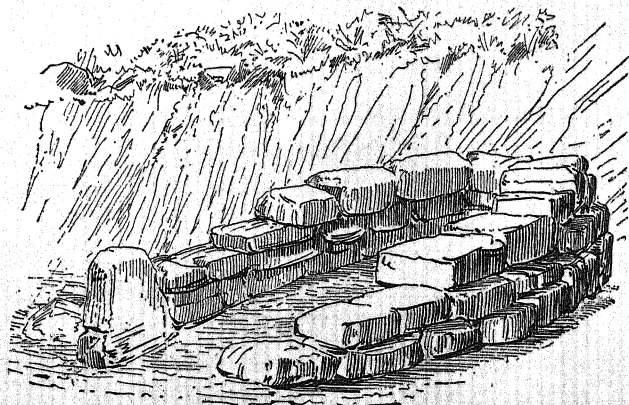


FIGURE 20. — TOMB AT COURTES.

found a large fragmentary vase, containing remains of burnt bones. Outside the tomb, at about the depth of 0.30 m. below the surface of the ground, and in a heap together, were five little rude vases, placed there perhaps from ritualistic reasons.

The vases produced by the excavations of the peasants, which I was able to see and examine on the spot, and which afterwards were nearly all taken to the Syllogos, are in enormous quantities. In PLATES VIII and IX, I have reproduced only

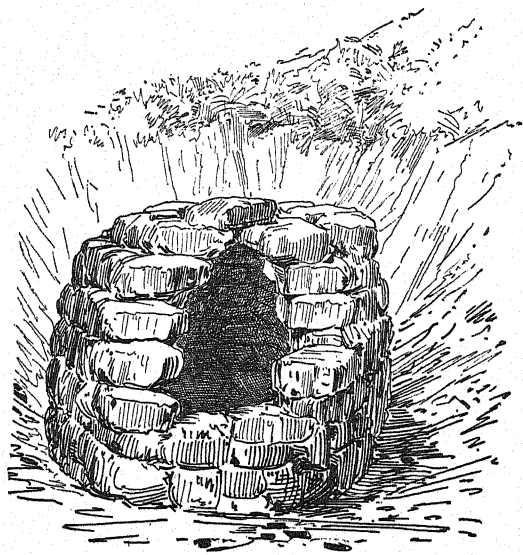


FIGURE 21. — TOMB AT COURTES.

the most remarkable and characteristic types; others will be figured and discussed by Professor Mariani in an article which is to follow. But besides those seen by me I have been informed that the peasants have made other finds which were brought to Candia after my departure.

Numerous above all are the false-necked amphorae, three of which I give in PLATE VIII (Nos. 1-3). Besides their form, more slender than that of the same class of vases found at Erganos and in other Mycenaean places, these have also another notable peculiarity, which is that of a hole in the upper part of the

body to admit air and facilitate the pouring out of the liquid, or they even have the central neck pierced. The one published as No. 2 is the largest: 0.18 m. in height by 0.157 m. in diameter of the body. The smallest of those examined by me is 0.095 m. in height by 0.064 m. in diameter. Not less numerous are the oinochoae, of which I present several examples (PLATE VIII, Nos. 7, 8, etc.), the vases with three handles (PLATE VIII, No. 5; PLATE IX, Nos. 10, 12), the cups, etc.

Besides these, a class well represented is that of the large vases in various forms, whether painted or rough and uncolored. I am sorry that, from a want of attention in the photographer, two of these (PLATE VIII, Nos. 5, and 6 *a* and *b*), a three-handled pitcher, and a vase in the shape of a *cantharos*, have been represented on so small a scale, that, placed together with the others, they give us no idea of their proportions. One of them (No. 5) is nearly half a metre high; the other (No. 6) is 0.275 m. in height and has a maximum diameter of 0.26 m.

Among these vases of large proportions we have also some ossuaries similar in form to those of Cnossos and Stavrakia, but

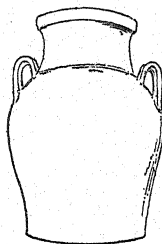


FIGURE 22. — OSSUARY
FROM COURTES.

without ornaments, and several *stamnoi* not very different from those used to this day by the Cretan peasants. Figures 21 and 22 reproduce an example of both. The dimensions of the *stamnos* are 0.42 m. in height and 0.25 m. in diameter of

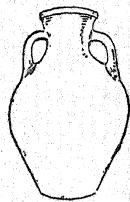


FIGURE 23. — STAMNOS
FROM COURTES.

body; those of the ossuary 0.51 m. in height, 0.37 m. in diameter of body — and 0.205 m. diameter at the mouth.

The painting of most of the vases of Courtes is opaque. Only in some of the handsomest and most elegant, as in No. 14 of PLATE IX, are there signs that they were painted in varnish.

FEDERICO HALBHERR.

ROME, April, 1899.

CRETAN EXPEDITION

XII

NOTES ON THE NECROPOLIS OF COURTES

THE so-called Placoura, or Courtokephala (PLATE VII), at the foot of which is situated the miserable Turkish village of Courtes, is a *pliocene* hill which rises isolated in the middle of a spacious valley, now but scantily cultivated, but which must have been not a little fertile in ancient times, when we consider the abundance of the perennial waters distributed by the calcareous mass of Mount Ida to the territory lying below.

The Mycenaean settlement was upon the hill and that part of the plain connected with its southern declivity. On the upper part of the height it would have been difficult to find foundations for houses, first of all from the precipitousness of its slope, and next from the slight tenacity of the *pliocene* clay, which in the course of centuries becomes deeply corroded by the violent hurricanes and storms discharged annually by the Libyan Sea upon the mountains of the Cretan coast.

The remains of the city consist of a few traces of terrace walls, of heaps of stones or isolated blocks, spread over the ground, and of an enormous quantity of fragments of pottery, which cover almost the whole declivity of the hill toward the south and the border of the plain. One might say it was the clay itself of this and the neighboring heights which must have furnished material for the potters of the district; for upon examination it is fine in grain and in kneading, not the least gritty,—conditions, as technical authorities say, for obtaining

the best vases, from the humble kitchen pot to the finest productions of Bernard Palissy.

But let us turn our footsteps in the direction where the fury of the Courtes peasants had given the assault to the tombs of their prehistoric forefathers. The trenches were still open, and what destruction had been wrought! Nevertheless, the cemetery seems of great extent, and many must still be the tombs which await the avidity of the *τυμβωρύχος*, or, as we will rather augur, the pick of the archaeologist. In which of them sleep the *ἄνακτες* of the little centre, who commanded the heroes of the country, and divided the spoil after their rapacious incursions?

The position of the necropolis is that which seems the best adapted; it occupies the western declivities of the hill, looking toward the setting sun, toward the goal of human souls after the course of life is over. I am not disposed to see merely chance in this fact. Could it be only a fortuitous coincidence that the burying-places of the early settlements are for the best part situated to the west of the town itself? This of Courtes is only one of several examples in Crete: my observations furnished others at Anopolis of Pediada, at Gournes, and at Prinià. To the west of the respective cities are also the necropoleis of Erganos and the tombs of Panaghia lately explored by Professor Halbherr.

The form of the tombs recalls the rude subterranean vaults of Camares, of which I shall speak in another article, and those of Erganos. The Mycenaean technical principle of the *tholos* is that which pervades the construction of the hypogaea of Courtes. But here also, as at Erganos and Camares, and as at Thoricus in Attica, we have small and poor constructions built with rough stones or splinters of local rock, scarcely, and not always, squared; broken according to plane of cleavage, which already disposes the rock in regular strata of 0.12–0.15 m. A material of such limited proportions does not lend itself to great buildings. This is precisely the case in the tombs of Thoricus, where the material is equally minute (splintered

little limestone flags), with which are obtained tombs of small dimensions and less regularity. At Thoricus, also, we have very singular plans, elliptic in form, which were unique until we came upon them now at Courtes, as we shall see.

The builder of Courtes sometimes so worked that his construction on the interior had the nearly beehive form, whereas outside,—and this for greater consistency,—it was

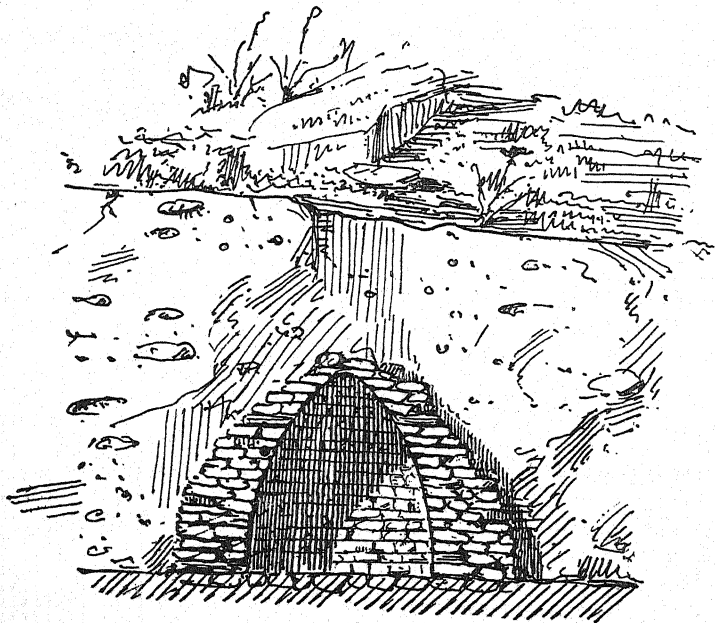


FIGURE 1 a. — THOLOS-TOMB AT COURTES, RESTORED.

almost quadrangular. I noticed this particularly in a tomb built against the mountain, and rendered visible in its section by a crack which had cut into the perpendicular of the soft rock. Examining the structure of these tombs, and especially those excavated where the ground is not so very steep, I was able to recognize this fact, which would confirm what Adler explains in the Introduction to Schliemann's *Tiryns*: that is to say, that the first step in constructing a tomb would be to dig out a large trench in the ground or in the side of

a hill. Such excavation being made, the *tholos* was built within it, by filling in the earth by degrees, so as to regulate the pressure, upon which the constructor calculated the resistance of the vault. At Courtes we must assume a similar process, considering the friableness of the rock, which could not resist the work of excavation within a hollow space, without bricking up at the same time.

The tombs of this necropolis have neither *dromos* nor tunnel, nor any other kind of vestibule.

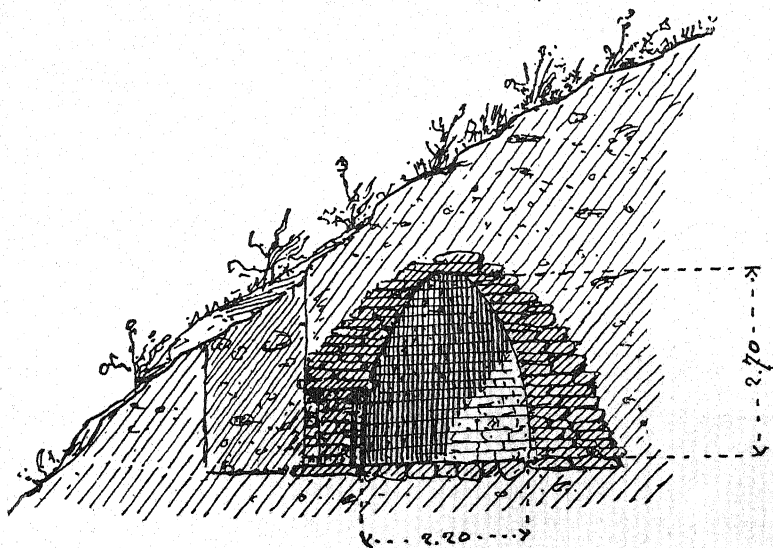


FIGURE 1 b. — THOLOS-TOMB AT COURTES, RESTORED.

In the tombs within the rock on the flanks of the Acropolis, where these have a rapid incline, the walled-up entrance to the tomb might have been visible on the surface of the descent; but I am of opinion that the familiar custom of concealing the tomb and its entrance prevailed here also, and that the tombs were all covered over.

As for the tombs placed in less precipitous tracts of ground and in the plain, I recognized a peculiarity which Cesnola, Dümmler, and others assert exists in the oldest necropoleis

of Cyprus, — that is, the existence of a small vertical well in front of the entrance. It is true that this did not seem to be necessary in most cases, the tombs being at a very slight depth below the level of the soil; but it must be remarked that their depth may have been originally somewhat greater, considering

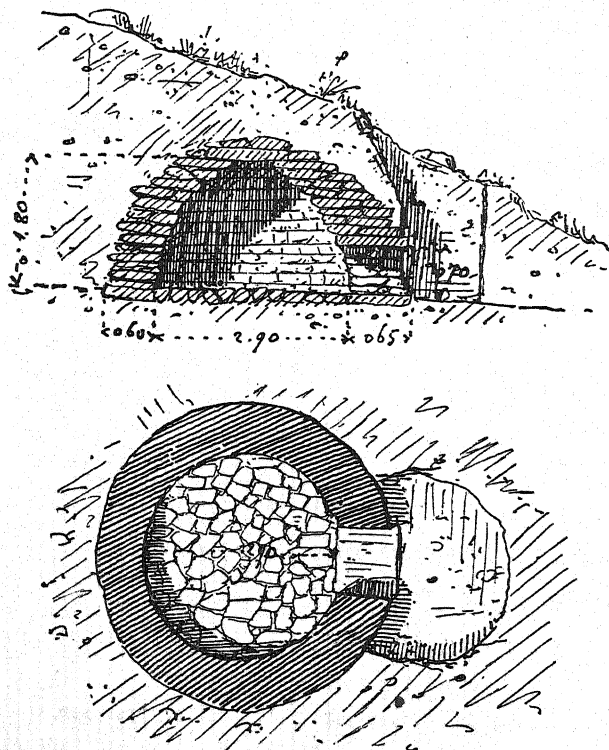


FIGURE 2 a, b. — THOLOS-TOMB AT COURTES: GROUND PLAN AND ELEVATION, RESTORED.

that the rock at the sides and roots of the hill must have worn away considerably in the course of centuries.

From my studies made on the spot, it would result that at least to a portion of the tombs in this cemetery a much greater antiquity is to be assigned than that which seems probable to Professor Halbherr.

The elements observed by me in some cases suggest to me

the restorations which I here present in Figs. 1, *a* and *b*, and 2 *a* and *b*.

May not these *tholoi* be representative of the Mycenaean period of Courtes? An object shown me by a peasant of the place, and which must have come from the necropolis, is *galopetra* (Fig. 3) in yellow jasper, in the shape of a heart.

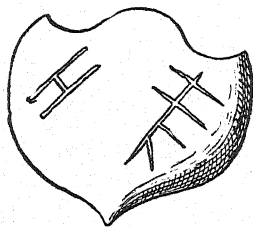


FIGURE 3. — GALOPETRA FROM COURTES.

It bears two signs, the pertinency of which to the linear series of Evans there seems to me no doubt of.

But certainly the most of the tombs are real derivatives, though degenerate, from the primitive *tholos* form. They are constructions in which it is already sought to abandon the structure which had prevailed exclusively in the Cretan cemeteries of the most ancient period, in the attempt at reaching the cubic form. Their plan, from a perfect circle, becomes horseshoe in shape; upon this plan rises the small cell, with walls which are partly vertical, as in the cylindrical tomb reproduced by Halbherr. Then they go on contracting themselves, owing to the scarce proportion of the material, but there is still a sufficiently ample covering formed by the placing of a broad slab. We are here dealing with the same facts which Tsountas remarked at Mycenae, which we perceive at Athens herself, facts which in Crete I recognized at Gournes, in Pedidada, in the Mycenaean settlement I came upon there; and at Siderokephala, near Krassi, in the same province, in a tomb which contained, like those of Courtes, Geometrical material.

To the irregularities in form correspond the varieties in size. Among the tombs, on plans more or less circular, one of the

largest I examined is that the reconstruction of which I have proposed in Fig. 2, which shows a diameter of 2.90 m. Two others measured by me (Figs. 4 and 5) have very small diameters, one 1.40 m., the other 1.15 m. Between these extremes I have found diameters of 2.60–2.20 m.; 1.80, 1.70–1.45 m. The average in the clear height of the *tholoi* that can be measured would be about 1.70 m.

The tombs which have diameters greater than 1.80 m. may be supposed destined for inhumed corpses; but what of the others? If the rite of crouched inhumation, recognized by Halbherr at Erganos, was also practised here, we may admit that also many other tombs of lesser proportions would lend themselves to the same purpose. But among these latter

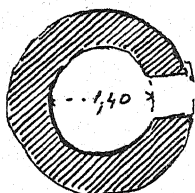


FIGURE 4. — TOMB AT COURTES.

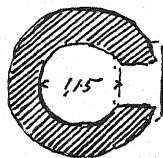


FIGURE 5. — TOMB AT COURTES.

are some that with difficulty could have contained even a crouched-up body. Therefore I should be tempted to suppose for Courtes the usage of secondary sepulture, — that is, the burial of the skeleton only, deprived of integuments, a custom which recent paleontologic studies have demonstrated as very frequent in the earliest times.

But if, on one hand, it is allowable to suppose this as an hypothesis, on the other, there are traces which attest, at least in some tombs, the practice of another rite, that of the *καύσις*, Professor Halbherr having found the remains of a cremated body, and the numerous vases in the form of ossuaries, which the peasants of Courtes brought to the Syllogos, also plainly indicating this rite.

At the point when the exploration of Courtes had to be abandoned, it was impossible that a satisfactory answer could

be given to the questions raised by what had been already found. To institute comparisons between these first data afforded us by the necropolis in question and those quite as scanty from the Cretan necropoleis of Anopolis and Stavrakia, would be also a vain undertaking. To fix when inhumation ended and cremation began; if and for how long they coexisted in the same necropolis; what is precisely in Crete the pottery that appertains to the two rites in their period of contact,—we must await the systematic exploration of the Cretan necropoleis, which can now at last be accomplished under the aegis of civil laws.

If I can already express a special desire, it is to aim, as soon as possible, at one of the cities to which the Doric idea attaches itself with the most tenacity—Lytos. Its necropolis, from what I have been able to learn, must be situated toward the vineyards in the valley of Askous. We shall see then if these Dorians, whom even the *Odyssey* places among the Cretans, were really the importers of the rite of incineration and of a style exclusively Geometrical: in other words, whether at Lytos will be found a first purely Mycenaean stratum,—a phase of transition,—and then a Geometric period; or whether, instead, the phase of transition lacking, we must attribute the Geometric production to an entirely new race superadded to the original inhabitants.

ANTONIO TARAMELLI.

TURIN, 1899.

CRETAN EXPEDITION

XIII

THE VASES OF ERGANOS AND COURTES

[Cf. PLATES VI, VIII, IX]

As Professor Halbherr has already remarked in a former article (p. 259), the pre-Hellenic material of Crete with which we were acquainted, was, up to a few years ago, exceedingly limited; and as to Ceramics, there were only to be mentioned the Mycenaean fragments of Cnossus¹ and the Cretan urns published by Orsi.² Our recent researches in the island have notably increased the ceramic examples, and some new classes of vases have come to light, such as that most special one of Camares, made known by Myres³ and by me,⁴ for which reason, in publishing my *Cretan Antiquities* in 1896, I thought the moment had arrived in which I might give an essay upon the succession of the various types of ceramic art which are represented in the island. But, naturally, the list was not complete, and the successive researches, especially of Evans and Halbherr, have greatly enriched it; and we may well believe that the soil of Crete reserves for us fresh revelations upon this point in the history of art. Wide⁵ has the credit of hav-

¹ Fabricius, *Ath. Mitth.* XI, 1886, pp. 110 ff., pls. iii-iv; Haussoullier, *Rev. Arch.* XL, pl. 23; Furtwängler-Loeschke, *Myk. Vasen*, pp. 22, 82.

² *Mon. Ant. pubbl. dall' Accad. d. Lincei*, I, pp. 202 ff.; cf. also Joubin, *Bull. Corr. Hell.* XVI (1892), pp. 295 ff.

³ *Proceedings of the Society of Antiq.* 1895, pp. 351 ff.

⁴ *Mon. Ant.* VI (1896), pp. 333 ff., pls. ix-xii.

⁵ *Athen. Mitth.* 1897, pp. 233 ff.

ing called attention to a characteristic class of vases largely represented in Crete, in which survive decorative elements of the Mycenaean style. In these brief notes we shall have occasion to confirm this traditional perpetuation of the Mycenaean style in the art of Crete, where, as is natural, the ethnical influences of the North have not produced any radical innovation, but certainly a modification of the art which preceded them.

The necropolis of Erganos, as appears from the descriptions Halbherr has given of it, still belongs to the Mycenaean epoch. The tombs, although they are not the large *tholoi* of Peloponnesus, still recall altogether the tectonic system of these. And also in other parts of Greece, continental and insular, have been found Mycenaean domed tombs of modest dimensions and rude structure.¹ What is important to note is, that the rite of *crouched inhumation*—a practice surviving from the aeneolithic epoch—is maintained in the tombs of Erganos, as in other cities during the Mycenaean civilization.² In Crete the *tholos* shape, whether hemispheric³ or in the beehive⁴ form, had already been met with, but in tombs carved out of the rocks. Evans discovered *tholos* tombs at H. Georgios,⁵ but he has not published a detailed description, so that we cannot compare them with those of Erganos. But while the tombs of H. Georgios are set into the walls of the city, the tombs of Erganos, from their position on the slopes of the mountain, may be compared with those of Milatos.⁶

Professor Halbherr has already described and reproduced, on PLATE VI, the contents of the best preserved tomb at Erganos. The small vase without ornament (No. 5) has no distinctive characters of epoch or style; but the three false-necked

¹ So in Gerania in Laconia, Perrot-Chipiez, VII, p. 410; Eleusis, *ibid.* p. 418; for Athens, cf. *Δελτιον*, 1888, pp. 83, 170.

² Tsountas-Manatt, *Mycenaean Age*, p. 139; Blinckenberg, *Memoires de la Soc. des Antiq. du Nord*, 1896.

³ "Tomb of Milatos," Orsi, 'Urne Cretesi,' p. 10 (in *Mon. Ant.* II).

⁴ "Tomba di Messarà," *ibid.* p. 6.

⁵ *Academy*, June 20, 1898, p. 513.

⁶ See note 3.

amphorae (Nos. 1, 2, 3) belong, without doubt, to the most characteristic vases of the Mycenaean type. Special consideration is merited for the barrel-shaped jar or *situla* with a hemispheric cover (No. 4), because there were in it human bones. Its dimensions prove that the body, or at least a portion of it, was enclosed therein after being reduced to a skeleton, and hence it may be regarded as an ossuary, or distinct receptacle, for the bones or remains which had been already inhumed there.¹

The custom of secondary sepulture, as still practised, ascends to the most ancient times, and we find examples of it everywhere.

The ossuary of such a form has no duplicate hitherto, either in Crete or elsewhere; it recalls to us, however, from its destination, the Cretan urns, which, whether they have served as receptacles in a secondary sepulture, as Orsi² supposes, or in a primary (crouched) entombment, as I think,³ are always vessels destined to contain buried men, and were deposited, as it appears, in domed tombs; and that not always in Crete the vessels destined for this purpose were expressly fabricated according to ritual form, is proved by the example of the bathing-tub⁴ and that of the *πίθοι* of the necropolis of Cydonia.⁵ We see, then, that the Cretans were accustomed sometimes to make use of as ossuaries, vessels or recipients employed for domestic purposes, such as may have been also the *situla* of Erganos.

The style of the vases contained in the tomb of Erganos deserves attention, because, while some have a decided Mycenaean character, the *situla*, of which we spoke just now, though

¹ De Morgan, 'Origines de l'Égypte,' II, *Ethnographie préhistorique*, p. 211 (Wiedemann); Colini, 'Necropoli di Remedello,' in *Bull. di Pal. It.* 1898; Hoernes, *Urgesch. d. Menschen*.

² *Urne Cretesi*, p. 219.

³ *Antichità Cretesi*, p. 345.

⁴ Orsi, *Urne Cretesi*, pl. ii.

⁵ Mariani, *Antichità Cretesi*, p. 203. The necropolis of El Argar offers an important example of the use of a *πίθος* as ossuary in the aeneolithic epoch. Cf. Siret, *Les premières ages du métal dans le S. E. de l'Espagne*, No. 245, p. 128; cf. also *πίθοι* of Ben Kōi; Perrot-Chipiez, *Histoire de l'art*, VI, p. 251; Virchow, *Altprojanische Gräber und Schädel*, 1882, p. 9.

resembling the latter as to the ornaments,¹ already expresses the informing principle of the Geometric style.

Ossuaries with hemispheric lids, but without a handle, are common in the Cretan Geometric style.²

The other vessels of Erganos are the false-necked amphorae, which recall in general the type of those in the tombs of Anoja,³ belonging to the third style of Mycenae.

As at Mycenae, so in Crete exists a transition type between the *tholos* tomb and the chamber sepulchre. It is represented in the necropolis of Panaghia.

The substitution of the Geometric style of pottery for the Mycenaean was in Crete, at least in some places, a gradual and not a sudden process.

This fact seems to me demonstrated by the necropolis of Courtes, although unfortunately the devastation and ruin wrought by the peasants only permit us to have imperfect and incomplete data.

The tombs in the necropolis of Courtes, in which the rite of inhumation and secondary sepulture seems to be still in use, or at least prevailing, have for the most part a different form from those of Erganos. They seem to be generally on the horseshoe ground-plan, but are built in an almost domed shape, so that they can be considered as a derivation more or less altered from the ancient *tholos* structure of Mycenaean type.⁴ Only few of them, according to the restoration given by Dr. Taramelli, resemble the beehive tombs of Erganos. But the presence of iron, which at Mycenae appears at a very late period, and rarely,⁵ is already an indication for dating the necropolis of Courtes; and even the pottery utensils collected

¹ The four-leaved cross (*Catal. ill. du Louvre*, I, 19, A 489) is a Mycenaean motive of Crete. Cf. Orsi, *Urne Cretesi*, pl. ii. The division into fields and the fishbone ornament in a Mycenaean vase of Siana: Gardner, *Ashmolean Vases*, 25.

² Cf. ossuary of Cnossus, *American Journal of Archaeology*, 1898, p. 256.

³ Orsi, *Urne Cretesi*, p. 7.

⁴ Tombs rudely constructed, of the Mycenaean epoch in Athens; cf. *Δελτιον*, 1888, pp. 83, 170.

⁵ Tsountas-Manatt, *l. c.*, p. 321.

in the necropolis show that it has had its greatest development during the prevalency of the Geometric style.

There are represented, it is true, some vases whose form seems to be derived from the Mycenaean *Bügel-kannen*. Some vases or fragments of vases in animal forms find replicas in others met with in Mycenaean strata of Crete, Cyprus,¹ and elsewhere; others, of an indeterminate style, might be ascribed indifferently to the late Mycenaean epoch or the Proto-Hellenic period; but the great majority of the vases of Courtes belongs without doubt to the Geometric style peculiar to Crete, which finds comparison in the vases of Stavrakia and Anopolis,² as well as in the fine example from Prinià described by Orsi.³

To complete, then, the data for establishing the chronology of the necropolis, is added the fragmentary inscription published by Halbherr, which, in his opinion, can be assigned to the seventh century, and hence agrees with the chronology generally admitted for the Geometric style in Greece, which is assumed to have flourished in the eighth-seventh centuries B.C.

And now let us examine separately the principal and most characteristic vases which the tombs of Courtes have brought to light.

In PLATE VIII, No. 1, we have a kind of false-necked amphora, like another vase of late Mycenaean style, still inédited, now in the Museum of the Syllogos of Candia. The triangular ornament is common to both the Mycenaean and Geometric styles.⁴

PLATE VIII, No. 2. Another form derived from the false-necked amphora.⁵

¹ The analogy between the Cretan and Cypriote vases is made evident also by Orsi (*American Journal of Archaeology*, 1898, pp. 264 ff.).

² Wide, *l. c.*

³ *American Journal of Archaeology*, 1898, p. 256.

⁴ Conze, *l. c.* II a.

⁵ Cf. Boeotian puppet, *Bullettino di Paleontologia Italiana* (Petersen-Pigorini), 1898, and *Tiryns*, pl. xi c. The zigzag ornament is common in the Geometric vases; cf. the Dipylon vase with the funeral procession and the vase from Anatalos, *Jahrbuch d. Inst.* 1887, pl. 3.

PLATE VIII, No. 3. Another modification of the false-necked amphora. The custom of putting strips across the neck is characteristic of the Mycenaean style.¹

PLATE VIII, No. 4. Fragment of a vase of Geometric style in the shape of an animal, to be compared with the cover ending in a horse's head illustrated by Orsi and by me,² and with the small duck which we shall see in Fig. 1. It is characteristic of the Geometric style to cover a figure with ornaments; as in the statuette of Belgrade.³ That kind of stirrup in the lower part of the body recalls the handles usual in the Geometric style;⁴ it might also, however, be the tail of the animal. Among the circlelets which decorate the body, there is one adorned with the four-leaved rose, and another with a cross in the middle and two appendages to its periphery. These ornaments are of Mycenaean origin.⁵ For the *svastika* common in Geometric vases,⁶ see those from the Cretan cemetery of Anopolis.⁷

Another vase in animal form (Fig. 1). This is entire. Its dimensions are 0.30 m. in length and 0.16 m. in height. It is a motive common among the Cretan vases⁸ and seems to be of Cypriote origin.⁹

¹ Cf. e.g. *Myk. Vasen*, form 68: cover* with two crossed handles of *bucchero*; Furtwängler, *Berliner Vasen*, form 155, n. 1501; many examples in *Ilios*, p. 419. For the triangular ornament and for the cross of the handles, cf. Mycenaean vase from Cyprus; Ohnefalsch-Richter, *Kypros*, xcvi, 1 d. For the net-squares, cf. *Myk. Tongef.* V. 24; Lau, pl. i, n. 3 (Cyprian).

² Mariani, 'Antichità Cretesi,' *Mon. Ant.* VI, pl. xii, n. 62 = Orsi, *American Journal of Archaeology*, 1898, pp. 262 ff. 10. Cf. also pyxis from Athens; Perrot-Chipiez, VII, p. 183, fig. 68, like Masner, *Wiener Vasen*, pl. i, 31.

³ *Anthropologie*, 1892, p. 238 = Perrot-Chipiez, VII, p. 188, fig. 70; cf. Boehlau, *Boeotische Vasen*, figs. 26-28, and *Monuments Piot*, I, pl. iii (rams from the Amyclaeum); 'Εφην. 'Αρχ. 1892, pl. 3.

⁴ Perrot-Chipiez, VII, p. 167, fig. 49.

⁵ Cf. vases from Camares, *Mon. Ant.* VI, p. 339, n. 6 (cf. Orsi, *Urne*, pl. i, fig. 2); pp. 340, 348.

⁶ Conze, iv, a, b; v, 4; vi, 1; Rayet-Collignon, pl. i and fig. 17.

⁷ Orsi, *American Journal of Archaeology*, 1898, p. 258.

⁸ From Axos; Mariani, 'Antichità Cretesi,' *Mon. Ant.* VI, tav. xii, n. 55; from Cnossos; Fabricius, *Ath. Mitt.* XI, 1886, pl. iii, n. 1.

⁹ Pottier, *Vases du Louvre*, pl. 6 (Cyprian); specially A 56, A 68, and "eul de lampe," in Perrot-Chipiez, VII, p. 104; E. Robinson, *Catalogue of the Vases in Boston*, n. 159 (Cyprus); Ohnefalsch-Richter, *Kypros*, pl. xcvi, 6, 2.

PLATE VIII, Nos. 5 and 6 (this latter is marked *a* on the front and *b* on the back) are two large vases of Mycenaean style, reproduced by an oversight in too small proportions. The considerable capacity of the vessels is characteristic of the Mycenaean products of Crete.¹ Number 6 is like other Cretan and Mycenaean *craters*; and even the decoration, although not exclusively Mycenaean, finds examples in this style.²

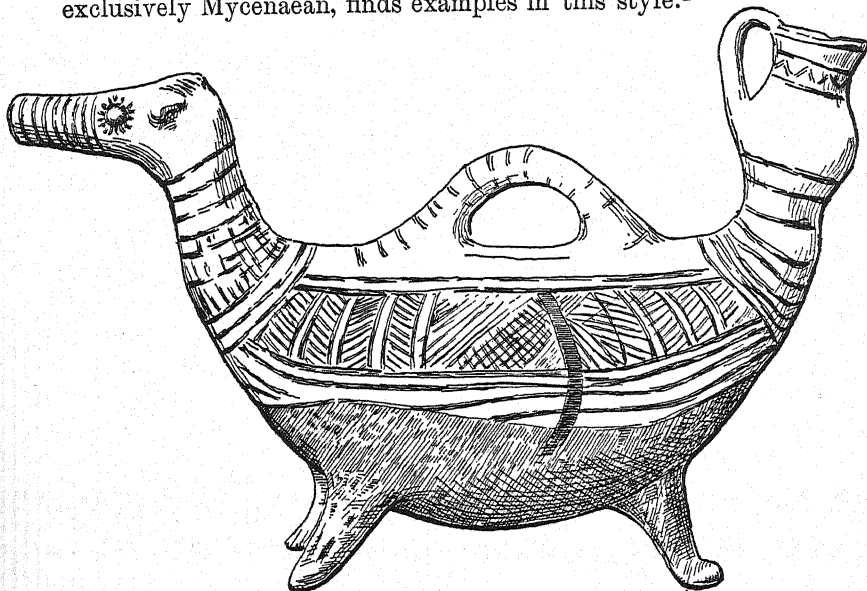


FIGURE 1. — VASE FROM COURTES.

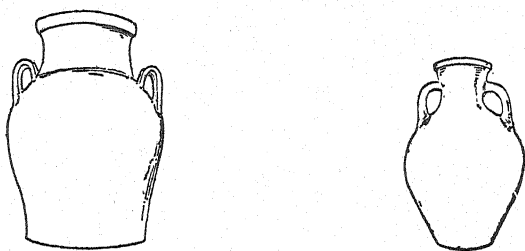
To the same group belong, as to form and size, the two unpainted vases published by Halbherr, Figs. 2 and 3 (above, p. 293).

Numbers 7–9 of PLATE VIII and 10–14 of PLATE IX represent a series of *oenochoe* and decanters, some with characteristic ornaments of the Cretan Geometric style. The forms Nos. 10 and 12, rather from their low horizontal handles to be called *ιδρίσκα*, have duplicates in Mycenaean vases.³

¹ Furtwängler-Loeschcke, *Myk. Vasen*, p. 22.

² The edges of No. 6 are like *Myk. Vasen*, p. 80 (Cameiros). Vases simply decorated with parallel and rectangular concentric lines are also to be found among the Mycenaean ware. Cf. *Myk. Vasen*, xxxiii, 328.

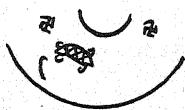
³ Cf. *Myk. Vasen*, ii, 14 (Ialysos).



FIGURES 2 AND 3.—VASES FROM COURTES.

In the vase No. 10 the regular distribution of the ornament in horizontal zones is characteristic of post-Mycenaean pottery.¹

Whilst this vase presents us with a crowding together and yet a symmetrical work distinctly Geometrical, another (No. 13) with a few scattered ornaments, an animal and two *svastikas*, is very like a Cypriote vase,² in which, however, the animal is a quadruped, while in ours it seems rather a fish with curled fins, which recalls somewhat similar characteristics in the



Cretan vases of Camares³ of the Mycenaean epoch, at the same time not extraneous to the style of Dipylon.⁴ Animals badly drawn—not well-defined in form like these—are found in Mycenaean vases.⁵ The greater part, however, of the decorative elements of these *oinochoae* belongs to the Geometric

¹ Bochlau, *Samos*, p. 62.

² Cesnola-Stern, *Cyprus*, pl. xciii, n. 3. Cf. Orsi, *American Journal of Archaeology*, 1898.

³ Mariani, 'Antichità cretesi,' p. 340.

⁴ See Rayet-Collignon, *Ceram.* p. 29, fig. 20.

⁵ See *Myk. Vasen*, xc, 418 a; Furtwängler says: "Little animals like grubs." Cf. also the scorpion or the other little beast in the Geometrical ash-urn from Cnossos. Orsi, *American Journal of Archaeology*, 1898, p. 256; cf. vase from the Amyclaeum, 'Εφημ. 'Αρχ. 1892, pl. iv, n. 2.

tradition. In No. 12 the zone of opposite triangles is common in Italic¹ and Greek² Geometric vases.

The zone of curvilinear lozenges or double ogives in No. 10 is Geometrical,³ as also the lanceolated leaves⁴ in the same; likewise the zone with zigzag on the neck of No. 7.⁵ That in reticulated angles on the shoulders of the same vase is of the transitional style.⁶

Of the vertical lines of small angles (Nos. 10, 12, 14) we have already spoken, and for the zone of black and white alternate angles round the neck of the hydricke (No. 12), compare a Geometric amphora of Italy.⁷

As for the circlet with the cross (No. 14), besides what I have said as to the vase in the shape of an animal (No. 4), one may compare some Mycenaean vases,⁸ some of the transitional,⁹ and some of the Geometric styles.¹⁰

A quantity of other vases of Courtes, representing slight varieties of this form and these decorations, are found in the collection of the Syllogos.

Number 15, and another vase like it but not figured here, represent two amphorae with ornaments which belong to the transitional stage between the Mycenaean and the Geometric styles.¹¹

Amongst the vases of Courtes figure also *stamnoi* like large bowls, with ornaments which are always of the Geometric style. There are found among them besides:

¹ Boehlau, *Die Ornamentik der Villanova Periode*.

² Cf. animal from the Amyclaeum, 'Εφημ. 'Αρχ. 1892, pl. 3, n. 1, 1 a (late Mycenaean), and bird-vase from Cyprus; Ohnefalsch-Richter, pl. xcviii, 6.

³ Conze, V, 5; Perrot-Chipiez, VII, p. 171, fig. 155 (Dipylon); Chytra from Curium, Rayet-Collignon, fig. 18; Pottier, *Louvre*, pl. 7, A 105 (Geometrical Cypriote), and urn from Cnossos; Orsi, *American Journal of Archaeology*, 1898, p. 257.

⁴ Perrot-Chipiez, VII, p. 171, fig. 55.

⁵ Conze, ii a.

⁶ *American Journal of Archaeology*, 1898, p. 252, fig. 2.

⁷ Pottier, *Louvre*, pl. 30, n. D, 57.

⁸ *Myk. Vasen*, pl. xxviii.

⁹ *American Journal of Archaeology*, 1898, p. 258, fig. 5.

¹⁰ Conze, vi, 5; x, 2.

¹¹ *Myk. Vasen*, pl. xxxvii, 382 (from Mycenae); Geometrised, xxxviii, 393.

Some *skyphoi* like the crater of Prinià published by Orsi;¹ and one of them preserves the cover with a handle of absolutely Geometric character.

Sundry vases, amphora-shaped with a wide mouth, the ornament of one of which is the same as that of our vase, PLATE IX, No. 16.

Two globular vases, one of which is adorned with simple fine stripes and broad bands with an empty zone round the middle of the body; the other in a similar manner, but with a double zone saw-tooth ornament in place of the vacant middle zone.

Two or more vases of the cyathus form, already existing among the Mycenaean.²



FIGURE 4.—GLOBULAR VASE FROM COURTES.

A globular vase with a wide mouth and two vertical handles, 0.13 m. high, 0.47 m. in circumference, adorned round the body with a zone of concentric semicircles placed above three parallel stripes³ (Fig. 4).

Two corpulent vases, wide-mouthed and with lip turned over, and two vertical handles. They are not very dissimilar in shape to the crater, and have a height, the one of 0.28 m., the other of 0.17 m. (Figs. 5, 6).

In the first the ornament of simple zones is round the body; in the second, in vertical stripes. It occupies the neck and shoulders.

Two vessels in form of *prochous*, one of which, figured at PLATE IX, No. 16, with an arched handle (height, 0.11 m.; circumference, about 0.28 m.). Type not unknown to Mycenaean pottery.⁴

¹ 'Antichità Cretesi,' *Mon. Ant.* VI, xii, 60 = Orsi, *American Journal of Archaeology*, 1898, p. 252; and Wide, fig. 14, 14 a; cf. skyphus from Ialysos, *Myk. Vasen*, 2, 17, and the vases from Mycenae, xxviii, 241, 242, 237; xxx, 276.

² *Myk. Vasen*, 246 (Mycenae).

³ Cf. PLATE IX, No. 15.

⁴ *Myk. Vasen*, xi, 66, xxi (Ialysos), and xxi, 154 (but with narrow neck), 37; cf. Ohnefalsch-Richter, *Kypros*, 16, b, etc.

A spherical vase on three feet; height, 0.17 m., with wide mouth and a ring handle (Fig. 7).



FIGURES 5 AND 6.—CRATER-SHAPED VASES FROM COURTES.

This is an archaic form represented among the Trojans and like the Cypriotes.¹ Cypriote is also the type of the following vase (Fig. 8).² But this form prevails also in the Geometric style.³

This other, Fig. 9, a little receptacle of 0.08 m. in height, is a prototype of the Corinthian *bombylia*.

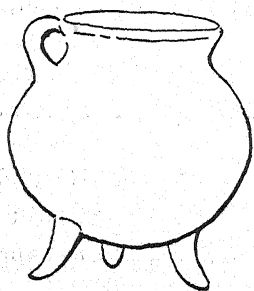


FIGURE 7.—VASE WITH FEET FROM COURTES.



FIGURE 8.—VASE OF CYPRIOTE TYPE FROM COURTES.

¹ Cf. Perrot-Chipiez, VI, fig. 66, p. 252, and animal-bodied vase described above.

² Height 0.19 m. Cf. Furtwängler, *Berliner Vasen*, form n. 74; cf. *Myk. Vasen*, II, 13 (Ialysos); Masner, *Wiener Vasen*, n. 26 (Cyprus).

³ Cf. *oenochōē*; Conze, v, 2.

PLATE IX, No. 17, is a hemispherical bowl adorned with stripes, resembling the covers of the Cretan ossuaries, whether of the transition or of the Geometric style.¹

Lastly, I will mention a characteristic fragment which might be the knob of a cover of a vase in Geometric style, of a common kind, especially in the Boeotian pottery² (cf. Fig. 10).

As Wide³ remarks, day by day the fact is more and more confirmed that every Greek region has had its own peculiar development of the Geometric style; or rather, I would say that each Hellenic town has produced a local style in the direction of Geometric decoration. And already I seem to see the



FIGURE 9.—SMALL VASE FROM COURTES.

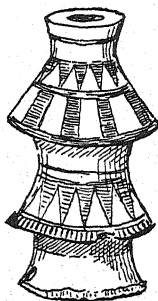


FIGURE 10.—FRAGMENT OF VASE OR COVER FROM COURTES.

Cretan Geometric type unfolding itself, however premature it may be to attempt to determine its characteristics. For the rest, it can already be asserted that in the Cretan Geometric style, a large share of the artistic Mycenaean patrimony has been preserved; the same Geometrical elements of decoration already existed in great part in the style preceding and in the insular style;⁴ what is new is the predominance of these ele-

¹ Cf. *American Journal of Archaeology*, 1898, pp. 256, 260.

² Cf. oenochœ: *Bulletin de Corr. Hell.* 1895, p. 275; chytra from Curium; Rayet-Collignon, fig. 18; Boehlau, *Boeotische Vasen*, fig. 31; Wilisch, *Altkorinthische Tonindustrie*, pl. i, 3, 9 (Proto-Corinthian).

³ *Jahrb. d. Inst.* 1897, p. 196.

⁴ For the Geometric type in the islands cf. Boehlau, *Samos*, p. 78. For the affinities with Cypriote ceramics, besides what we have said in the present article, cf. Orsi, *American Journal of Archaeology*, 1898, p. 264.

ments over the animal and vegetable forms and the geometrical tendency in decorative combinations.

This being understood, it remains now to study a question which will not be solved until the material for it be notably increased, and we are acquainted with that in other centres of the island and beyond it ;¹ since, as in the Cretan dialect, we note gradations determined by ethnical prevalence in the various regions, so in the ceramic painting it remains to be seen whether the Geometric style may have had a more full development in the towns more greatly Doricized.

As to the chronology of the vases of Courtes, we have expressed the view that they may go back to the seventh century B.C.; to a later date I do not think they can be assigned ; because there is not a trace in them of orientalizing elements, as in the Rhodian, Melian, and other vases, and their decoration has not yet, as in the vases of Dipylon, felt the attraction of figured representations.² Now, however slow the development of Cretan civilization may be supposed to have been, it cannot be denied that Ionia, Rhodes, and Egypt would in the seventh and sixth centuries have exercised some influence in the orientalizing sense upon the style of Cretan art. The fact also that the vases of Courtes possess a peculiar individual aspect excludes the possibility that they were imported. And the foregoing history of ceramic art in the island which produced the vases of Camares, the Cretan urns, and the vases of Cnos-sos, authorizes the belief that the ceramic tradition also flourished during the epoch succeeding.

LUCIO MARIANI.

ROME, 1899.

¹ Greatly to be desired is the publication of the Geometric vases of Thera (*Arch. Anz.* 1897, pp. 78 ff.), which, according to Dragendorff, represent a still more advanced stadium than the Cretan (p. 79).

² Cf. the Boeotian vases without figures which are more ancient than those with animals ; Boehlau, 'Böotische Vasen,' *Jahrbuch d. Inst.* 1888.

CRETAN EXPEDITION

XIV

NOTES UPON THE SKULLS OF ERGANOS

THE skulls unearthed in the excavation of the necropolis at Erganos were sent me by Professor Halbherr to be examined in the Anthropological Museum of Rome, where I have marked them with the numbers, 1969, 1970, 1971, 1972. One only of them is perfect; two are the upper caps of the cranium, more or less whole; another is about the half of the skull cap. There are, besides, the frontal bone of another cranium, and four thigh bones; as the extremities of the latter are wanting, they are of little value.

The importance of these human remains is principally due the epoch to which they belong; that is, the Mycenaean epoch.

The skulls which bear the numbers 1970, 1971, 1972 are of ovoidal shape; two of them are female, and, according to my nomenclature, are thin ovoids (*ovoides subtilis*); the other is male, rather broader—a broad oval in fact (*ovoides latus*). The most perfect (Figs. 1 and 2) is the female, No. 1970, measuring

Horizontal circumference	502 mm.	Index of width (<i>dolichocephal</i>)	74 mm.
Cubical capacity	1267 c.c.	Height (approximate)	125 "
Maximum length	181 mm.	Vertical index of height	69 "
Maximum breadth	135 "		

The fragment No. 1972 cannot be measured.

The male fragment No. 1971 is 189 mm. in maximum length, 150 mm. in maximum breadth, with 79.4 of index of breadth (*mesocephal*).

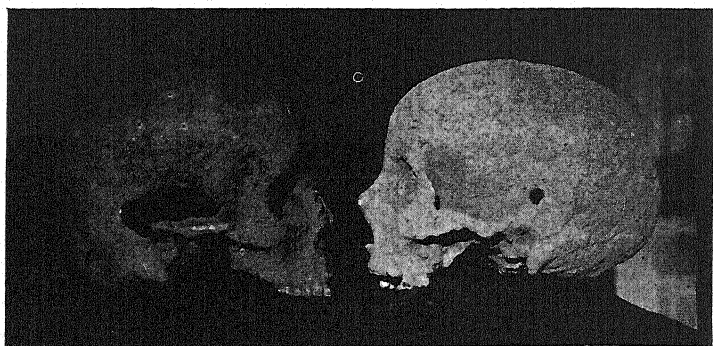


FIGURE 1.

Ovoides subtilis ♀. No. 1970.

FIGURE 1a.

Ellipsoides cuneatus ♀. No. 1969.

MYCENAEAN SKULLS FROM ERGANOS IN CRETE (FEMALE). SIDE VIEW.

The cranium No. 1969 (Figs. 1a, 2a), a female skull, and perfect, deserves a special attention from its formation, which

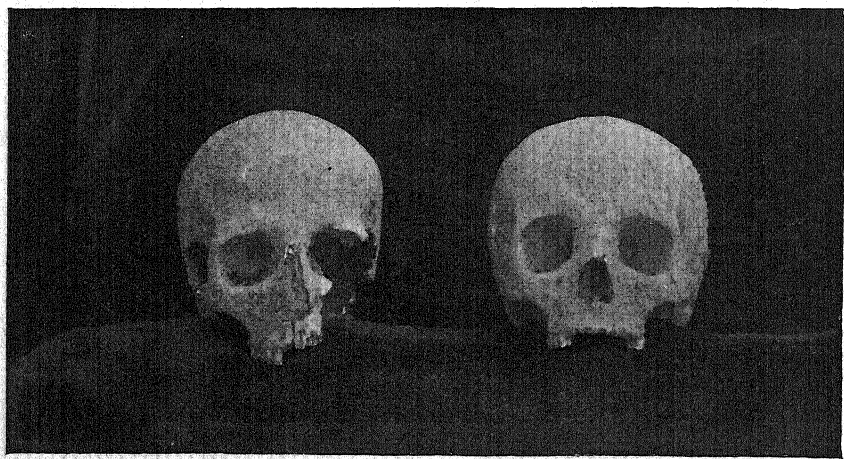


FIGURE 2.

Ovoides subtilis ♀. No. 1970.

FIGURE 2a.

Ellipsoides cuneatus ♀. No. 1969.

MYCENAEAN SKULLS FROM ERGANOS IN CRETE (FEMALE). FRONT VIEW.

is not so common as that of the other three above examined. As can be perceived from the *norma verticalis* (upper outline), this skull is an ellipsoid with the wedge-like occiput, hence

its name of *ellipsoides cuneatus*. But, besides these two characters, it presents a levelling or flattening of the whole arch, and a very distinct parallelism of both the sides. The flattening of the arch, which produces a low cranium, may be seen as we see in Fig. 2a, as also in Fig. 1a, in which the cranium is seen from one side; from this distinct character the *ellipsoid*, besides being wedge-like (*cuneatus*), is also plane (*planus*).

This is a skull of beautiful and regular lines, considering the variety to which it belongs; it has the brow (or forehead) vertical, perfectly full, which presents a quadrilateral superficies well delineated like a parallelogram. The face is a long, fine, narrow oval, of triangular form (Fig. 2a); the orbits of eyes are quadrangular, slightly oblique; the nose is not detached from the forehead by a furrow as is usually the case, but makes with it a fine and regular obtuse angle; the nostrils are straight and the pyriform aperture regular, normal, and narrow as is usual in a finely formed nose (*leptorrhine*). The lower jaw takes a semicircular curve in the alveolar part, as the upper jaw with the palate. The chin is prominent, and is prettily curved. The skull is that of a young woman, and the wisdom teeth are not yet cut. It has a slight peculiarity in that the frontal suture is still open. It measures :

Horizontal circumference	515.0 mm.	Index of height	731.0 mm.
Internal capacity (about)	1387.0 c.c.	Face, height	112.0 "
Maximum length of cranium	182.0 mm.	" breadth	124.0 "
Maximum breadth	139.0 "	Facial index	90.0 "
Index of breadth	76.4 "	Length of nose	51.0 "
Height	133.0 "	breadth	22.0 "
		Nasal index	43.1 "

To sum up, we find that the four skulls belong, from their forms (or shapes), to two varieties, the *ellipsoids* and the *ovoids*: *ellipsoides cuneatus planus* (No. 1969, female); *ovoides*, (a) *subtilis* (Nos. 1970 and 1972, female), and (b) *latus* (No. 1971, male).

To the inquirer as to the race or family to which the skulls belong that we have examined, I can only reply that such forms

as the *ellipsoids* and the *ovoids* are peculiar to the Mediterranean race. Along the whole basin of the Mediterranean, as well in the European as in the African regions, Egypt naturally included, as well as the shores of Asia Minor, the predominating forms of the human skull have been three: that is to say, the *ellipsoidal*, the *ovoidal*, and the *pentagonal*, all of elongated forms, whether *dolichocephal* or *mesocephal*. There are, however, other secondary and less numerous forms, which do not enter into the present discussion. Even the two varieties of the ovoid, the broad and the narrow, are very common, and with them also the *ellipsoides cuneatus*; but the latter, flattened and with parallel sides, like our example from Erganos, is rather rare. Among a few others seen by me, there is one precisely similar to the Cretan in the Roman Museum of Anthropology, and it is from the Etruscan tombs near Orvieto (No. 1338), and is considered to be of the sixth century B.C.

If we may draw inferences from evidence so scanty, I should say that in ancient Crete, at the Mycenaean epoch, a people of the Mediterranean race was dominant.

G. SERGI.

ROME, 1899.

CRETAN EXPEDITION

XV

THE *STARTUS* IN THE CRETAN INSCRIPTIONS

IN the Great Inscription of Gortyna (column V, line 5) is the phrase, *δε' ὁ Αἰθαλευστάρτος ἐκόσμιον οἱ σὺν Κύ[λ]λοι*. This phrase has been collated with the headings of Cretan decrees, *ἐπὶ τῶν Αἰθαλέων κοσμιόντων*, *ἐπὶ τῶν Ἐχανορέων κοσμιόντων*, and with the Hesychian gloss, *στάρτοι· αἱ τάξεις τοῦ πλήθους*, and thus the common opinion has been formed that the *στάρτοι* may be subdivisions of the whole or part of the citizens of the various Cretan cities, whence were taken in turn the supreme magistrates, the *cosmi*. In this hypothesis the difficulty consists in determining what the relations were between the *starti* and the *φυλαί*. The Great Inscription of Gortyna speaks, in the place quoted, of the *startus* of the *Αἰθαλεῖς*, in other places of *φυλαί* (col. VII, line 51, and col. VIII, *passim*); and it would seem thus to show that *στάρτος* and *φυλή* are two very different things. Every doubt is excluded by an inscription of Lyttos of the Roman age (see below), where a plain distinction is made between *στάρτοι* and *φυλαί*. Now in the headings of the Cretan decrees recur names not only different from those of the three Doric tribes, as *Ἐχανορεῖς*, *Αἰθαλεῖς*, *Αἰσχεῖς*, but also those of the three Doric tribes of the *Ἱλλεῖς*, *Δυμᾶνες*, and *Πάμφυλοι*. For this reason Ciccotti¹ and Semenoff²

¹ *Studi e documenti di storia e diritto*, XIII (1892), p. 174.

² *Antiquitates iuris publici Cretensium* (Petropoli, 1893, Diss.), pp. 92 ff.

have supposed that the Ἰλλεῖς, Δυμᾶνες, and Πάμφυλοι in Crete cannot be tribes as in Argolis, but *starti* as, in their opinion, the Αἰθαλεῖς are. Semenoff quotes the example of Ephesus, where the Ἀργαδεῖς are no longer a tribe as in general in the Ionian countries, but a simple *χιλιαστής* of the tribe of the Ἐφεσέας. The analogy is only half correct; since the division in *χιλιαστές* is artificial and recent, and we can well understand how, new elements introducing themselves in the citizens, and forming with these new tribes, they were able to apply the word *χιλιαστές* to the already existing subdivisions of the ancient element. But the division into *γένη* and *φρατρίαι*, with which Ciccotti and Semenoff compare more or less the divisions into *starti*, is doubtless much more ancient than that into *χιλιαστές*, and of a nature differing from that into tribes. It is difficult to understand how a tribe can have descended into the rank of *γένος* or of *φρατρία*. But even if we admit an anomaly of this kind, it would be always strange enough to find it not in one city only, but in a collection of autonomous cities. We may add that it would be very singular if, while all over Greece in the selection of magistrates the tribes were essentially taken into account, in Crete the start was always made from a subdivision of the tribe instead.

These difficulties have not escaped G. Busolt, who, to eliminate them, has proposed a new hypothesis.¹ According to him the inscriptions in the headings of which occur the names of Αἰθαλεῖς, Ἐχανορεῖς, etc., are anterior to a democratic revolution which took place in Crete in the course of the third century B.C. Before this revolution the magistrates were taken from the *starti*. The *startus* was "eine Adelssippe, sei es ein grosses *γένος*, sei es eine Vereinigung von *γένη* oder eine Phratricie." After the democratic revolution, however, the *cosmi* are taken not from the *startus* only, but from the body of the *φυλῆται*. To the times after this revolution and to the middle of the third century would belong the inscriptions dated ἐπὶ τῶν

¹ *Griechische Geschichte*, I², p. 347, note 2.

Ῥλλέων, Παμφύλων, Δυμάνων κοσμιόντων. This hypothesis will not stand criticism. In the first place, the tribes are certainly anterior to the colonization of Crete, and hence we can explain how they recur equally in the various cities of Crete. But the formation of the nobility and of the γένη is later than the colonization, because it supposes an inequality in the landed property which could scarcely have existed among the early colonists. In this way it is exceedingly difficult to explain the 'Adelssippe' of the Αἰθαλεῖς as well at Gortyna as at Dreros and at Malla. The assertion also of Busolt, that the inscriptions wherein are mentioned the Ῥλλεῖς, Δυμᾶνες, and Πάμφυλοι are of later date than the others, does not seem exact. For example, it seems to me improbable that the inscription of Malla dated ἐπὶ τῶν Αἰθαλεῶν κοσμιόντων, where the judges of Cnossos and of Lyttos are thanked, can be anterior to the second century B.C.¹ Busolt anticipates this objection, and notes that it is not impossible the Αἰθαλεῖς might form in Dreros and in Malla a φυλή, whilst in Gortyna they were only a γένος or a phratria. This seems to me a very improbable hypothesis, and open to the same objection that I have urged above against the transformation of the Δυμᾶνες into a *startus*. But in Gortyna itself the facts seem in contradiction with the hypothesis of Busolt. An inscription of this city—which seems to Professor Halbherr, from the form and the *ductus* of the letters, the most ancient among the non-archaic inscriptions recently published by him—is dated ἐπὶ τῶν Δυμάνων κοσμιόντων,² whilst another more recent document is dated ἐπὶ τῶν Αἰθαλεῶν κοσμιόντων.³ That this last belongs to a later period is clear from the forms of the letters, as well as from the date βασιλεύοντος Δημ[ητρίου τοῦ Ῥν]τιγόνου ἔτους τρίτου. That the reference here is to Demetrius II, called the Aetolian, scarcely needs demonstration; because in the third year of the reign of Demetrius Poliorcetes

¹ Halbherr, *Museo Italiano*, III, pp. 627 ff. In the date I follow Haussoullier, *Bulletin de Correspondance Hellénique*, IX (1885), p. 17. See also Scrinzi, 'La guerra di Lyttos,' in the *Atti dell' Istituto veneto*, Seventh Series, IX (1897-98), pp. 1575 f.

² *Am. J. Arch.* Second Series, I (1897), pp. 198 ff.

³ *Ibid.* pp. 188 ff.

his father, Antigonus Monophthalmus, was still living, and hence in the heading both would be mentioned as kings. Therefore the inscription belongs to 237 or 236 B.C.

All this ought to incline us to the opinion that the *startus* is neither a φυλή nor a subdivision of the φυλή. We are put on the track of a right interpretation by a fragment of Gortyna, which Comparetti restores as follows: ἐγρ]άτται αἱ ὁ Αἰ[θ]α-
[λεὺς στάρτος ἔγρα]φον κτλ. But the restoration is not absolutely certain. It seems to me, however, that the light we need comes from the treaty between Gortyna and Rhizena, published by Halbherr in this JOURNAL, I (1897), pp. 204 ff., where it is said of the σαρταγέτας and the κοσμίων of Gortyna who goes to Rhizena, δ]αμιόμεν δὲ δαρκνὰν καὶ κατακρέθαι πεδὰ τε τῷ στάρτῳ καὶ πεδὰ τῶν Ῥιπτενίων. As to the meaning of this prescription, I shall speak farther on. But it is plain that if one is obliged to do a given action together with the *startus* and together with the Rhizenians, the *startus* can by no means be a τάξις τοῦ πλήθους, but something different and superior to the Rhizenians in general. We have only to compare the formulas so very frequent in Cretan inscriptions: ἔδοξε τοῖς ἄρχουσι καὶ τῷ κοινῷ, ἔδοξε τοῖς κόσμοις καὶ τῇ πόλει.

The *startus* is nothing more than the whole body of the *cosmi*. The phrase ὁ Αἰθαλεὺς στάρτος ἐκόσμιον means that the *startus* who had in that year the cosmos-ship, — or, as we may say, the *cosmi* of the year in question, — were chosen from the tribe of the Αἰθαλεῖς. The names of the Αἰθαλεῖς, Εχανορεῖς, Αἰσχεῖς, are names of tribes as well as the Ὑλλεῖς, Δυμᾶνες, and Πάμφυλοι. As in the cities of Asiatic Ionia, to the four so-called Ionian tribes were added others, especially the Βωρεῖς and the Οἰνωπες, so in the Cretan cities evidently to the three so-called Doric tribes some other tribes were added, the more frequent of which, according to the epigraphic material, is that of the Αἰθαλεῖς. And in Crete, as pretty generally all over Greece, the tribes especially were taken into account in the election of the magistrates. Of course when I say the *cosmi* were elected according to their tribes,

I do not mean to affirm that all those inscribed in the tribes were eligible; and hence I do not place myself at all in contradiction with Aristotle, *Polit.* II, p. 1282 a, according to whom the *cosmi* were taken ἐκ τινων γενῶν. Also in Athens, for example, the Archons and their γραμματεῖς were elected one from each tribe; but the ζευγίται were ineligible up to 453–452 B.C., and the θῆτες nominally were never eligible at all. Against this interpretation of the word *status*, the authority of Hesychius ought not to be brought forward; since the lexicographers were often inexact in their statements about public antiquities. What should we know of the μέιον and the κούρειον, notwithstanding the numerous statements about them in the lexica, if the inscription of the Demotionidae had not thrown some light upon the subject? As to etymology, it is certain that στάρτος cannot be separated from στρατός. This latter word is usually derived from the root στορ or σταρ, 'to stretch,' and connected with the verb στορέννυμι.¹ Semenoff (*op. cit.* p. 93) compares it with στερεός, and thinks that the meaning is that of *aliquid firmum, compactum, bene junctum*. But whether this be the primitive meaning of the word στρατός, or only a later derivation, there can be no difficulty in finding the vocable στάρτος, in the sense of a body of magistrates, closely related to that signification.

These inferences as to the meaning of the word *status* give, in turn, new light for the interpretation of the treaty between Gortyna and Rhizena. I select some phrases of it: τὸν δὲ σπαρταγέταν καὶ τὸν κοσμίοντα ὃς κ' ἄγε[ι 'Ριττ]έναδε κοσμεν πεδὰ τῷ 'Ριττενίῳ κόσμῳ, τὸν μὲ πειθόμενον τῷ πο[λέμῳ].

Startagetas is the head of the *status*; he who in a later age — for the first time in a decree of the fourth century² — is called πρωτόκοσμος. Let us remember that in many Cretan

¹ Curtius, *Grundzüge der griech. Etymologie*⁴, p. 215. Vaniček, *Etymologisches Wörterbuch*, II, p. 1145. Prellwitz, *Etymologisches Wörterbuch*, p. 304. J. Schmidt, *Kuhn's Zeitschrift*, XXXII (1892), pp. 379 f.

² Mariani, *Monumenti Antichi*, VI (1896), pp. 299 ff. = Michel, *Recueil*, no. 440.

documents, beginning with the Great Inscription of Gortyna (*l. cit.*), the fact is clearly alluded to that the *cosmi* have a chief who serves especially at Eponymus, for example: ἐπὶ τῶν Αἰθαλέων κοσμιόντων τῶν σὺν Κυῖαι¹; ἐπὶ τῶν Ἑλλέων κοσμι[όντων τῶν σὺν] Κυδάνναι.² There is also the case of one of the *cosmi* called by a special name, in distinction from the body of the other *cosmi*. Thus in an inscription of Gortyna³ we read: οἱ κόρμοι οἱ σὺν Ἀρατογόνῳ τῷ Ἀρτέμωνος κῶ ἱεροργὸς ἐπεμέληθεν τῷ ταύ[ρ]ω κ[αὶ] τᾷ ἐρίφῳ. ἐκόρμιον οἶδε· Ἀρατόγονος Ἀρτέμωνος, Κύδανς Ὀνυμάρχῳ ὁ ἱεροργός, Πύρρος Ἀρκεσίλλῳ κτλ., whence we see that the ἱεροργός is the second of the *cosmi*, ranking immediately after the *σταρταγέτας*. According to our inscription, however, the *startagetas* and the simple *cosmus* of Gortyna who goes to Rhizena can exercise the office of *cosmus* together with the *cosmus* of Rhizena; in the last part of the phrase *cosmus* is used collectively, according to a usage not rare in Cretan inscriptions. I read, in continuation of Halbherr's reading, τὸν μὲ πειθόμενον τῷ πολέμῳ, because the sense and the examination of the squeeze persuade me of the impossibility of accepting any restoration except that of πολέμῳ. This addition does not represent to us the object of κοσμέν, because κοσμέν has in the Cretan inscriptions the sole meaning of exercising the office of *cosmus*, — a meaning which is here imposed by the vicinity of the participle κοσμιόντα, which no one could take in any other sense. We are forced, therefore, to accept it as a limitative opposition to τὸν σταρταγέταν καὶ τὸν κοσμιόντα. The construction of πείθομαι with the genitive, though rare, occurs several times: it is true that, in all the examples known to me, the matter is of a personal genitive.⁴ The sense, in any case, seems clear: not always are the *startagetas* and the *cosmus* of Gortyna to be able to exercise the office of *cosmus* at Rhizena, but only when they do not pass through the territory of Rhizena for reasons of

¹ *Mus. Ital.* III, p. 657. ² *Mus. Ital.* III, p. 647.

³ Halbherr, *Mus. Ital.* III, pp. 695 ff.

⁴ See Kühner, *Ausführl. Grammatik*, II, I³, p. 359.

war; it is not a war with Rhizena that is understood, but the passing in arms through territory belonging to this city. In this case the reason why the Gortynian *cosmus* is not admitted to exercise the jurisdiction together with the *cosmi* of Rhizena is obvious, and is analogous to that by which in Rome a magistrate who has the *imperium militare* cannot enter the *pomerium*.¹ The inscription continues: *δαμιδμεν δὲ δαρκνάν*, that is, *ζημιούν δραχμήν*. The construction of *ζημιούν* with the accusative does not offer difficulties, although in the examples known to me the cases are of an accusative of the internal object or of an indeterminate accusative. The reference here seems to be to the power of the *cosmus* and of the *σταρταγέτας* of *ἐπιβολὰς ἐπιβάλλειν*, to use the customary phrase in Athens; that is, to impose small fines for contraventions of the rules or usages relative to behavior in assemblies, sacred places, or the like. The measure of the fine which the *cosmus* of Gortyna can impose at Rhizena is doubtless very trifling. But that is natural. If the *cosmus* of Gortyna had the power of imposing at Rhizena heavier penalties than this, the autonomy of the city would be in danger. And just to prevent this power of the *cosmus* of Gortyna from degenerating into an abuse, it was established that he could not use at his own pleasure the fine exacted, but must spend it in agreement with the *cosmi* and people of Rhizena, or pay it into the city treasury. This was of such import that, in the case he does not comply with these prescriptions or he exacted heavier fines, he was subject to a *κσενεία δίκᾱ*. What is meant by this *δίκᾱ*? We know, from an inscription of Gortyna, that one of the *cosmi* was called *κόσμος ξένιος*.² This would be equivalent to the *praetor peregrinus* at Rome, who had jurisdiction over foreigners. By *κσενεία δίκᾱ*, therefore, was probably meant an accusation laid before the *κόσμος ξένιος*. In

¹ On the military character of the *cosmi*, cf. Aristot. *Pol.* II, p. 1272 a, *τὴν ἡγεμονίαν οἱ κόσμοι τὴν κατὰ πόλεμον ἔχουσιν*. Hesych., *κόσμος*· στρατηγός.

² Comparetti, *Mon. Antichi*, III, pp. 73 f., no. 148. See the Great Inscription, col. XI, line 17.

this sense, rather than in the meaning of *γραφὴ ξενίας*, I would explain the *δίκη ξενική* mentioned in the oath of the Itanians: ¹ οὐδὲ δίκαν ἐ[παξέ]ω ξ[ε]νικά[ν] τῶν πολιτῶ[ν οὐδαν]ἰ ἐριθεό[ζω]ν παρεορέσι ο[ὐδεμιᾶ]ι. It seems that the citizens were under obligation to settle the controversies which might arise between them and Itanos, and were not to carry their disputes before the *κόσμος ξένιος* of another city. The opportunity might present itself when two citizens of Itanos might meet in foreign parts, whether for war or for business.

It only remains now to be seen how these hypotheses of mine agree with the inscription of Lyttos where the *starti*² are mentioned: . . . τῆς δόσεως τοῖς στάρτοις κατὰ τὰ πάτρια καὶ Θεοδαισίοις καὶ Βελχανίοις · τὸν δὲ πρωτοκοσμούντα κατ' ἔτος ἢ ἐπιμελούμενον διδόναι διανομὴν Θεοδαισίοις ἐκ τῶν δόσεων ὧν οἱ στάρτοι λαμβάνουσιν (δηνάρια) , ἀφ' καὶ Μαΐαις καλ(άνδαις) ἐκ τῶν ταῖς φυλαῖς διδομένων χρημάτων, τὸ ἐνδέον οἴκοθεν προεισφέροντα ἀμφοτέραις ταῖς διανομαῖς κτλ. The sense seems to me clear, although partly misunderstood by M. Doublet. The *protocosmus* or the *epimeletes* has to make, on occasion of the Theodaesia and of the kalends of May, a distribution of money to the people, to the amount, as it appears, of 1500 *denarii*, upon each of the anniversaries. The first time the sum must be taken from the treasury into which flows the money which the *starti* receive (how or why the inscription does not explain); the second from the treasury of the tribes. The case is foreseen when neither of these treasuries can supply the necessary amount; then the *protocosmus* or *epimeletes* is bound to make up the deficiency from his own purse. It seems that the state has not any funds disposable except from those two sources; private munificence must make up the rest. This could be explained if the *starti* were nothing else than colleges of magistrates; because in the passage quoted above *στάρτος* means the

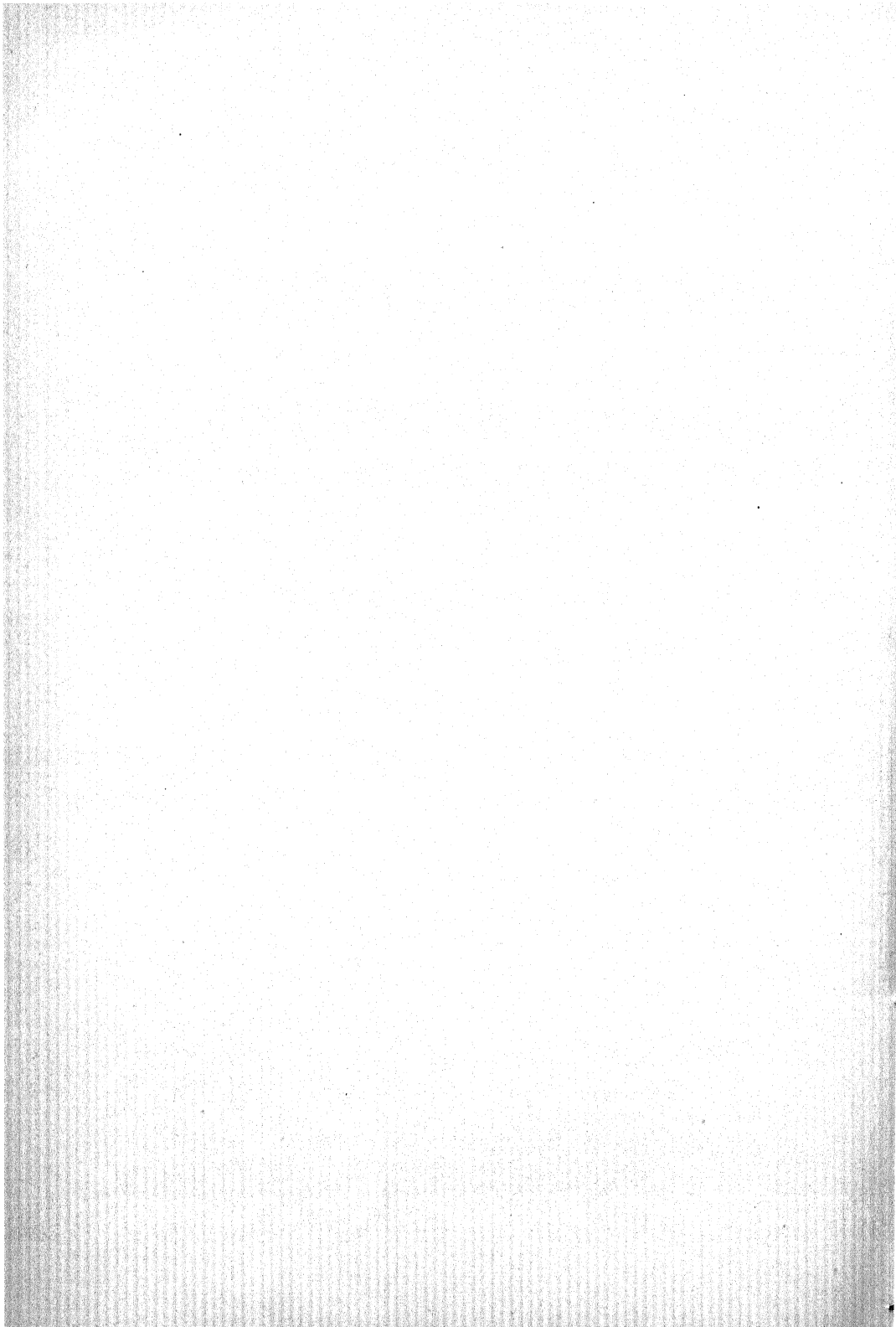
¹ *Mus. Ital.* III, pp. 563 ff.

² Doublet, *Bull. de Corr. Hellénique*, XIII (1889), pp. 61 f.; Comparetti, *Mon. Antichi*, III, p. 190.

college of the *cosmi*; but the number of magistrates increasing with time, and new magistracies being created along with the *cosmi*, all these colleges may very well have taken the name of *starti*, which would have come to be an equivalent almost to *συναρχίαι*.

GAETANO DE SANCTIS.

ROME, 1899.



1901
January — June

ARCHAEOLOGICAL NEWS¹

NOTES OF RECENT EXCAVATIONS AND DISCOVERIES; OTHER NEWS

HAROLD N. FOWLER, *Editor*
49, Cornell Street, Cleveland, Ohio

GENERAL AND MISCELLANEOUS

A NEW PUBLICATION. — *Les Trésors d'Art en Russie* is a new publication undertaken by the Imperial Society for the Encouragement of the Fine Arts in Russia. Each number is to contain twelve plates, explanatory text in Russian and French, and brief news notes. The first number ranges in contents from three Greek statuettes of the fourth century B.C., from the Sabouroff collection, to a table and three bronze vases made by Thomire in the early years of the nineteenth century. (*Chron. d. Arts*, March 16, 1901.)

NECROLOGY. — **Adolf Bötticher.** — Dr. Adolf Bötticher, widely known through his works upon Olympia and the Acropolis of Athens, died suddenly at Danzig on June 9th. He was sent out at Adler's recommendation in 1872 as technical commissary for the excavations at Olympia. Since 1879 he had edited the *Wochenblatt für Architekten und Ingenieure*. (*Athen.* June 29, 1901.)

Emil Hübner. — Professor Emil Hübner died at Berlin in his sixty-seventh year February 21, 1901. He was an eminent classical scholar, widely known for his services to the Latin 'Corpus' of Inscriptions, especially in the Spanish and English sections. Besides other contributions to epigraphy, he wrote 'Römische Herrschaft in Westeuropa,' and contributed with Mommsen and Vahlen to *Hermes* in the seventies. He was also in charge of the *Archäologische Zeitung* at Berlin from 1868 to 1872. (*Athen.* March 16, 1901.)

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor FOWLER, Editor-in-charge, assisted by Miss MARY H. BUCKINGHAM, Professor HARRY E. BURTON, Professor JAMES C. EGBERT, JR., Professor ELMER T. MERRILL, Mr. GEORGE N. OLCOTT, Professor JAMES M. PATON, and the Editors, especially Professor MARQUAND.

No attempt is made to include in the present number of the JOURNAL material published after June 30, 1901.

For an explanation of the abbreviations, see pp. 123, 124.

Xavier Barbier de Montault. — Mgr. Xavier Barbier de Montault died at Peuch April 1, 1901. He was distinguished for the number and variety of his liturgical and archaeological publications. He contributed to the *Annales archéologiques* of Didron, the *Revue de l'art chrétien*, the *Bulletin monumental*, and many other periodicals, and published many separate treatises. (*Polybiblion*, May, 1901, p. 464.)

Wolfgang Reichel. — Dr. Wolfgang Reichel, Secretary of the Austrian Archaeological School at Athens, died at Athens, December 18, 1900. He was born at Vienna May 2, 1858, and did not turn to archaeology until his twenty-eighth year. His chief works are on Homeric weapons and pre-Hellenic religion.

Ernest de Sarzec. — Ernest de Sarzec, minister plenipotentiary, correspondent of the Institute, and officer of the Legion of Honor, recently died at Poitiers at the age of sixty-five years. For twenty years he conducted excavations at Tello, in Babylonia, and much of what is known of early Babylonian history and art became known through his efforts. (*Chron. d. Arts*, June 15, 1901.)

CONSTANZA. — **A Grave with Paintings.** — From Constanza in Roumania comes the report of the discovery of a large grave with wall paintings on stucco, which have been partly destroyed by water. Among the figures that are preserved are Heracles with club and lion's skin, a female figure holding a roll, two winged Victories, and a seated youth with a double axe. The accounts give no clew to the date. (*Athen. Mitth.* XXV, 1900, pp. 466-467.)

EGYPT

RECENT ARCHAEOLOGICAL WORK. — Recent archaeological work in Egypt is especially developing knowledge of the Roman period and the subsequent Coptic civilization which leads directly on to the Arabic. Work is being prosecuted vigorously in Alexandria in several quarters. A large mortuary edifice, which was in use for a long time from about 100 A.D., has been excavated and lighted by electricity (see below). Among small finds are a complete writing outfit, from the Fayoum, where Grenfell and Hunt continue the search for papyri, and a bronze stilus with a curious masked figure for a handle. (F. W. von Bissing, *Arch. Anz.* 1901, pp. 57-59.)

A GREEK INSCRIPTION. — In *C. R. Acad. Insc.* 1901, pp. 201-204, Henri Weil publishes a Greek inscription from Egypt as follows: "Ετους Γ αὐτοκράτορος [names of the emperor] | μὲν δὲ Ἐπειφ ΚΕ [names of the author of the inscription] | Νίγερ Γλυβερινού [his profession] | ἀνέθηκεν βωμόν [ν τοῖς ἐν ὀνότῃ] ροῖς ἐπιφανέσι θεοῖς ἐπιτάσσει | ὑπὲρ τῶν εὐεργῶς ἡ [σκημένων ἡδὲ] | ἐν μηνί Β λουτήρων [numeral and indication of the material] | καὶ τοῦ περιλειπομένου χρόνου | τοῦ αὐτοῦ ἔτους ὡς ἄλλων [δεήσσει], στύλ(ων) Β ἀνὰ πόδες Α καὶ [ποδ...] | καὶ Δ ποδ ΚΑ καὶ Ζ πο[δ.] καὶ ληνών Β καὶ μακρ[...] | καὶ τριστί[χ]ων πᾶσι στ[ύλοισι] | καὶ πλακῶν, κατεργασ[σ]χ[έντων], καθιδρύσσει βωμόν τῷ ἀνακτι. The place of discovery is unknown. Some one dedicates an altar to some gods who appeared to him in a vision and who aided him in accomplishing some work in two months.

ABU GURAB. — **Excavations at the Temple.** — Last December the Berlin Museum resumed the excavations which it has, during the past two

years, conducted at Abu Gurab, near the pyramids of Abusir, and which have for their object the uncovering of the sun-temple, built at that place by King Ra-n-woser (fifth dynasty). These excavations have resulted in disclosing more definitely the location of the buildings surrounding the great obelisk. On the south side of the latter was found the entrance to the beautiful chapel, which is adorned with reliefs of the king's jubilee, and of the three Egyptian seasons. Before the entrance stood two large granite stelae, rounded off at the top, and two basins. The entrance to the substructure of the obelisk has likewise been discovered, but on account of the large mass of *débris* but little progress has been made into the interior.

A number of valuable objects were found in connection with these excavations,—for example, an antique basalt lion, small enamelled plaques, weights, and fragments of inscriptions. One of the latter, found on a door lintel, contains a part of the dedicatory inscription, in which it is stated that the king designed the erection of the obelisk as his memorial to the Sun-god. South of the temple area was found a ship, fully 30 yards long, built of tiles and wood, pointing due east and west. This was, no doubt, one of the 'sun-vessels,' meant to carry the Sun-god through the lower regions by night. (G. STEINDORFF, *S. S. Times*, March 30, 1901.)

ABYDOS.—**Petrie's Discoveries.**—In *Biblia* XIV, 1901, pp. 4-7, is a letter from W. M. Flinders Petrie, giving a brief account of his discoveries at Abydos to February 22. These include about thirty inscriptions of Menes and his predecessors, some fine jewellery of the queen of Zer, the successor of Menes, some forty inscriptions on stone and ivory of Zer, about sixty tombstones with names of the royal household, ivories, tombstones, and other objects of King Den (fifth dynasty), besides numerous other objects of interest.

ALEXANDRIA.—**A Necropolis.**—The *Chron. d. Arts*, January 26, 1901, referring to the *Illustration* of January 12, describes a necropolis at Kom-el-Chogofa, near Alexandria. Galleries and monuments occupy four stories, only the second and third of which were cleared. In the second is a vestibule and a small temple of mixed Egyptian and Greek architecture. It is surrounded by a horseshoe gallery with at least ninety-one *loculi* in two rows, one above the other, containing about five hundred skeletons. The third story consists of a rotunda with beautiful arcade and central lantern, a triclinium, sepulchral chambers, and an inclined plane leading to the fourth story and the chapel situated at the summit of the mound. See also *Biblia*, XIV, 1901, pp. 59-62. The *Berl. Phil. W.* March 30, 1901, emphasizes the importance of the paintings and reliefs of this structure and a similar one at Gabbari, and says that the Ernst Sieglin expedition is likely to establish the main outlines of the history of the famous Serapeum. Various topographical investigations have been made with success. The construction of new quays will probably lead to further discoveries.

DÊR AND EL-AKHAIWA.—**American Discoveries.**—Excavations were made in 1899-1900, under the direction of Dr. G. A. Reisner, for the new collection begun at the University of California, the expenses of which were borne by Mrs. Hearst. Near Koptos, at Shurafa, a cemetery was discovered, dating from the earliest period of Egyptian history, but from which no especially valuable results were gained. On the west bank of the Nile, near Dêr, opposite Koptos, buildings of the eighteenth dynasty were

examined, and finally tombs of the earliest period and of the New Empire were found near El-Akhaiwa, opposite Menshiye (Ptolemais). At this place, on a bluff along the Nile, a fortification was discovered, which probably dates from the New Empire. During this winter the excavations near Dêr and El-Akhaiwa are being continued, and it is the intention of Dr. Reisner later on to examine the extensive ruins and cemeteries of Gebelên and Meâla, between Luxor and Esne, on the west and east banks of the Nile respectively. (G. STEINDORFF, *S. S. Times*, March 30, 1901.)

EL AMRAH. — **Prehistoric Cemeteries.** — The April number of *Man* contains an illustrated preliminary report of Mr. Randall-MacIver's excavations this winter at El Amrah, a village six miles south of Abydos. Two prehistoric cemeteries were explored, containing six or seven types of graves, among the contents of which were model boats of various kinds and also pottery cattle, thus making it clear that the 'New Race' were a pastoral people also. Among the objects illustrated are weapons of war and the chase, dolls representing the people themselves, who are figured with strongly curled hair, and specimens of basket-work. The most valuable find was an inscribed slate of a date considerably anterior to the first dynasty; this is by far the earliest known example of the use of hieroglyphs. (*Athen.* March 16, 1901.)

BEIT-KHALLAF. — **Tombs of Neterkha and Hen-Khet.** — The two royal tombs discovered in the desert above the village of Beit-Khallaf, west of Griga, have been completely excavated. They belong to Neterkha, builder of the step-pyramid at Saqqarah, and Hen-Khet. These are probably the first and second kings of the third dynasty. (JOHN GARSTANG, *Biblia*, 1901, pp. 129 f.)

SAKKÂRA. — **The Chapel of Unas.** — At the pyramids of Sakkâra, Maspero has had Mr. Barsanti continue the excavations previously begun there. Alongside of the mausoleum of King Unas (Onnas), the chapel devoted to the worship of the deceased has been completely uncovered, and incidentally a well-preserved sarcophagus of the Saïte period, containing some wonderful jewellery, was also discovered. (HILPRECHT, *S. S. Times*, June 15, 1901.)

THEBES. — **The Rock Sepulchres.** — The English archaeologist Newberry has undertaken to uncover and make accessible the rock sepulchres of Shaykh 'Abd el-Qurna, near Thebes, in which the dignitaries of the New Empire were buried, and whose inscriptions and mural paintings are of inestimable value as regards the history of Egypt and its civilization. Thus far only a very small number of these underground tombs have been laid bare. (G. STEINDORFF, *S. S. Times*, March 30, 1901.)

BABYLONIA AND ASSYRIA

AN EARLY BABYLONIAN RUIN. — In *S. S. Times*, January 26, 1901, H. V. Hilprecht, in a brief account of an expedition in southern Babylonia, mentions extensive remains of a pre-Sargonic city (before 3800 B.C.). The ruins lie about forty miles south of Nippur and cover an area about a mile square. A head of a gazelle, in copper, found in this ruin, shows the artistic ability of the Sumerian inhabitants. The design and execution are excellent. The eyes are of white shell, with the pupils of brown shell. Between the eyes is a triangular ornament of mother-of-pearl, inlaid with

circular ornaments of white and brown shells. The neck is hollow, and the head was probably attached to a wooden, copper-plated body.

BABYLON.—**Discoveries by the Germans.**—In an appendix to the second edition of Dr. Friedrich Delitzsch's pamphlet entitled 'Babylon' (No. 1 in the *Sendschriften der Deutschen Orient-Gesellschaft*), dated February 1, 1901, three important discoveries in Babylon are announced: First, the location of the famous Marduk Temple, Esagila, described by Herodotus, and frequently referred to in Babylonian inscriptions. It is covered by the ruin mound known as Amran. The Temple lies buried under such a mass of rubbish that no one had ever penetrated into it. Second, the great procession street rebuilt by Nebuchadrezzar and named Aibur-shabu. Slabs of the limestone pavement have been found, bearing the inscription, "Nebuchadrezzar, King of Babylon, son of Nabopolassar, am I. The street of Babylon I have paved gloriously for the procession of the God Marduk, the great god, with tablets of limestone. Oh! Lord Marduk, grant everlasting life!" The determination of the position of this street has led also to the determination of the position of the wall, Imgur-Bel, the great inner wall of Babylon. The third discovery of importance was that of the Temple E-mach, the sanctuary of the goddess Nin-mach, the giver of fertility, in the ruin mound of Kasr, about the centre of the Babylonian complex of ruin mounds. (*Nation*, June 20, 1901; cf. *S. S. Times*, March 30, 1901, *Berl. Phil. W.* June 15, 1901.)

The Lion of Babylon.—Under the title, *Der Loewe von Babylon*, the German Orientgesellschaft has published a splendid reproduction in colors of the famous lion clay relief found about a twelvemonth ago by Dr. Koldevey in the ruins of Babylon. The reproduction is one-half the size of the original—namely, 1.95 m. in length and 0.90 m. in height. This relief is one of the many that made up the frieze along the famous procession street of the God Marduk. The dark-blue background with yellow stripes, together with six white rosettes, and the lion in white alabaster clay, form one of the most magnificent specimens of the polychromic art that Oriental antiquities have produced, and the best specimen of the brick enamelling arts of Babylonia extant. At the same time the relief serves to demonstrate the close connection between the work of the Babylonians and of the Persians in this line, as is shown by a comparison with the similar unique and splendid Persian lion frieze in the Louvre. It is evident, however, that the work of the Babylonians was superior to that of the Persians. (*Nation*, May 9, 1901.)

NIPPUR.—**The Excavations.**—In the *Scientific American*, March 2, 1901, Albert T. Clay gives an account of the excavations at Nippur, with five illustrations from photographs. The excavations ceased temporarily during the past winter, to give time for working out some of the results attained.

PALESTINE

JERUSALEM.—**Inscriptions on an Aqueduct.**—In *C. R. Acad. Insc.* 1900, pp. 683–687, C. Clermont-Ganneau gives extracts from a letter of Rev. Germer-Durand and publishes some Roman inscriptions from an aqueduct, the construction of which has been ascribed to Solomon, Pontius Pilate, and Herod. It is now seen to have been built, at least in part, in the year 195 A.D., under the supervision of the engineers of the tenth legion.

The Director of the American School.—The Director of the American School in Palestine for the year 1901–1902 is Professor H. G. Mitchell of the Boston University Divinity School.

KEFR KENNA.—**An Inscribed Mosaic.**—In *C. R. Acad. Insc.* 1900, pp. 555–557 (fig.), C. Clermont-Ganneau describes a mosaic found at Kefr Kenna, perhaps the site of Cana. The inscription, in poor Hebrew, mentions Joseph, son of Tanhoum, son of Bitah. This may be the Count Joseph who founded several churches in Galilee under Constantine.

TELL ESH-SHIBĀB.—**An Egyptian Monument.**—In *Athen.* July 6, 1901, George Adam Smith describes a basalt slab with Egyptian inscription and figures built into a wall at Tell esh-Shibāb in Hauran, some three miles west of El-Muzeirib. One of the cartouches is that of Seti I, and that king is represented presenting libations to the god Amen, behind whom stands the goddess Mut. The monument is to be published in the *Quarterly Statement of the Pal. Ex. Fund* for October. The only other Egyptian monument discovered in Hauran is the monolith at Sheikh Sa'd.

ASIA MINOR

INSCRIPTIONS FROM VARIOUS PLACES.—In *B. C. H.* XXIII, 1899, pp. 417–420, J. Pargoire publishes two inscriptions from Heraclea Pontica, of which one is on an amulet, one Christian inscription from the neighborhood of Chalcedon, and one from Iconium. This latter gives in fuller form the text published by Huart in his book *Konia*, p. 192, and shows that the title *λογιστής* does not belong to the procurator Julius Publius, but to a certain L. Calpurnius Orestes, one of the *principales* of Iconium. Other errors in Huart's copy are corrected, and minor corrections noted in his text of the two Latin inscriptions given by him.

In *Athen. Mitth.* XXV, 1900, pp. 398–444, A. Körte completes his publication of the inscriptions collected by him in 1893–95, and adds a few collected at Dorylaeum and Pessinus in 1899. No. 1 from Aizanoi contains an obscure oracle given to a priest of the *Κριστης*. No. 2 is a fragment of the series of documents in *Le Bas-Waddington*, III, 857–859, relating to the cult of the emperors from Augustus to Claudius. The remaining seventy-five inscriptions are of the usual Asiatic sort. Five are honorary, and among these, No. 63 adds slightly to our knowledge of the mystic society of *Ἀρραβοκαοί* (cf. *Athen. Mitth.* XXII, 1897, p. 38, No. 23). No. 59 is a milestone of the years 251–253 A.D., originally probably from a direct road from Dorylaeum to Amorium. The others are partly funerary inscriptions (Nos. 15, 20, and 21 are metrical), and partly votive, chiefly to Zeus Bronton. No. 32 contains a dedication to Zeus *ἐξ αἰλῆς*, which Körte, following Wilamowitz's explanation of Apollo Aulaites, interprets as "Zeus from the cave," and identifies with the chthonic Zeus Bronton. No. 33 is a metrical prayer to Zeus for rain, and is dated by the consuls for 175 A.D. Such dating is very rare in Phrygian inscriptions. In *Athen. Mitth.* XXV, 1900, pp. 467–470, eleven inscriptions from Phrygia are published, chiefly from copies made by G. Weber in 1899. They are for the most part ordinary epitaphs.

ANBAR.—**A Superb Sarcophagus.**—The *Berl. Phil. W.* February 16, 1901, states on the authority of the *Frankfurter Zeitung* that a marble sarcophagus, weighing about 32,000 kg., has been found on the top of a hill near Anbar, in the province of Koniah. Its length is 3.75 m., its height

nearly 2 m. On all four sides are reliefs of hunting scenes and battles, and the long sides have also groups of five persons, some in pensive attitudes, others carrying plates, grapes, and other fruits. There are also reliefs representing children. On the lid are a man and a woman. The man's face expresses deep sorrow.

ANGORA.—**A Prominent Provincial.**—In *C. R. Acad. Insc.* 1900, pp. 704-712, Th. Homolle publishes a Greek inscription from Angora, dated by mention of a Parthian war and of several persons at a time not long after 114 A.D. The inscription was on the base of a statue in honor of a Tiberius Julius Severus, a relative of the Pergamene Julius Quadratus, of King Alexander of Armenia, of two tetrarchs named Amyntas, of a Julius Acylas and a Claudius Severus, and a descendant of King Deiotarus I of Lesser Armenia and Galatia. He had made great expenditures for the city and had held several offices. The statue was set up by the eleventh tribe of Angora.

CARIA.—**An Archaeological Journey.**—In *B.C.H.* XXIV, 1900, pp. 24-69, G. Cousin continues his 'Voyage en Carie.' The temple of Zeus Labrandeus is near the summit of a hill on a platform in two terraces surrounded by a wall. The entrance was from the west. There are no inscriptions. The route from Labranda to Berber-Khayvé is described in some detail, with description of the "Asiatic" remains, chiefly Carian tombs, some of which are well preserved, though but few yield inscriptions. Not far from Tchinar near a tomb are remains of a colossal statue of primitive workmanship. A search for Coliorga, one of the three sanctuaries dependent upon Stratoniceaea, resulted in eliminating a number of possible sites, and the discovery of ten inscriptions, chiefly sepulchral. Cousin gives an itinerary of his journey to Dalaman-tchai, thence to Bedir-bey, and thence to Termessus in Pisidia. He publishes forty-five inscriptions, many of them mere fragments, dedicatory or sepulchral, and describes a curious Byzantine rock-sculpture which seems to represent the Good Samaritan, and the infant Jesus between an ox and an ass. He also gives some corrections to the text of the imperial rescript published by Diehl.

GORDIUM.—**Early Phrygian Civilization.**—Excavations on the supposed site of the Phrygian capital, carried on by G. and A. Körte in the summer of 1900, though limited in extent, have proved of great interest. In the terra-cotta relief tiles with which the brick wall of a temple was faced, we have, apparently, the origin of the Phrygian rock-cut façades. Potsherds indicate a history as far back as 1500 B.C., and Greek importation from the sixth century on. The tumuli contain both burned and buried remains. One, from the end of the independent period (eighth century), when southern influences prevailed, shows a civilization comparing favorably with that of contemporary Greece. Others, of the Lydian epoch, indicate a high degree of prosperity, and considerable intercourse with Greece, especially Athens and Corinth rather than the Ionian cities. A curious form of native pottery is a cup-shaped ladle with long spout and strainer, perhaps used in dispensing the native beer. Portions of wooden grave-frames and implements from the eighth century are preserved. (*Arch. Anz.* 1901, pp. 1-11; 5 cuts.)

POGLIA.—**An Inscription.**—In *Jh. Oesterr. Arch.* I. IV, 1901, Beiblatt, pp. 37-46, M. Rostowzew publishes an inscription from Fugla, the

ancient Pogle, in Pisidia. It reads: Πόπλι[ο]ν Καίλ[ι]ον [Α]ουκ[ιανόν . . .] ο[. . .] ἀγων[ο]θετήσαντα ἀγῶνα πεντ[αετηρικὸν σύν | τε] ἀνδριάσιν καὶ βραβείοις καὶ τεμμη[θέντα β'](?), | δ[ι]εδοκότα διανομᾶς ἔτεσιν πολ[ιτείας] | βουλευταῖς τε καὶ ἐκκλησιασταῖς [καὶ πᾶ]σι πολεῖταις, κτίζοντα ἔργα τῇ πόλει, κρείνοντα τοπικὰ δικαστήρια ἔτεσιν κοινω[ν]ίας, πέμψαντα ἀνῶνα εἰς τὸ Ἀλεξανδρέων ἔθνος, προη[γ]ορ[ήσαν]τα καὶ | [πρεσβεύσα]ντα ὑπὲρ τῆς πό[λεως], | [γένους τ]οῦ πρω[τεύοντ]ος ἐν | τῇ πα[τρίδι]. The light thrown on the constitution of the town is interesting.

VÉZIR-KEUPRU.—An Oath of Fidelity to Augustus.—In *R. Ét. Gr.* 1901, pp. 26-45, Franz Cumont publishes a Greek inscription of forty-two lines found by him at Vézir-Keupru in Paphlagonia, the site of the ancient city called successively Phazimon, Neapolis, Neoclaudiopolis, and Andrapa. The identity of these cities places the boundary of Paphlagonia farther toward the east than was supposed. The inscription is dated in the third year of the province, i.e. 3 B.C. It is the earliest oath of allegiance to an emperor known, and shows that although Augustus preserved at Rome the forms of the republic, he was regarded in Paphlagonia as a king, the successor of the ancient dynasty. Temples were built to him and his cult established almost immediately after the annexation of the province. A résumé of this article, with the text of the inscription, is in *C. R. Acad. Insc.* 1900, pp. 687-691.

THRACE AND SCYTHIA

CONSTANTINOPLE.—Two Greek Reliefs in the Ottoman Museum.—The museum has recently acquired two important reliefs. The first, from Chalcedon, is a work of the sixth century B.C., representing Zeus in travail before the birth of Athena; the second, from Nisyrus, is a grave stele of about 480 B.C., on which a youth is represented. The style and workmanship are admirable. (S. REINACH, *C. R. Acad. Insc.* 1900, p. 699.)

HERACLEA LYNCESTIS.—A Roman Inscription.—In *B.C.H.* XXIV, 1900, pp. 247-252, R. Mowat publishes a Roman inscription discovered by Louis Couve at Monastir, the ancient Heraclea Lyncestis. The inscription is the epitaph of a Dacian, Aurelius Daza (Saxa or Saza), who is called *centenarius* and *perfectissimus*. He was ninety years old and had served thirty years in the auxiliary cavalry. On pp. 252-253, Th. Homolle adds a few notes to the text of the inscription.

DISCOVERIES IN SOUTHERN RUSSIA.—In the region of the Kuban, north of the Caucasus, interesting specimens of Siberian work of the sixth century B.C. have been recovered from the scattered contents of two tumuli opened by Cossacks. There are ornaments of gold set with glass and stones, brooches with pendants, articles of bronze, iron, and alabaster; of silver, only two plaques ornamented with gold, similar to finds in Yekaterinoslav government, remained. Of Greek objects found here, the most interesting is an Ionic silver omphalos phiale of the early fifth century, with inscription some eighty years later, ΑΓΟΛΛΩΝΟΞ ΗΓΕΜΟΝΟΞ ΕΙΜΙ ΤΟΜ ΦΑΣΙ. The title Hegemon for Apollo is new. The Phasis is probably the Kuban, the ancient boundary between Europe and Asia. In the remains of an ancient villa on the Caucasus coast was found, with other fine specimens of Hellenistic art, a very beautiful bronze bust of a woman wearing a Phrygian cap ornamented with silver and copper. From near Kertch comes a stone sarcophagus with interesting subjects painted on the

inside. In Chersonesus, tombs adjoining the city wall have yielded much gold jewellery and a bronze vase that had been given as a prize at games in honor of the Dioscuri, inscribed ΑΘΛΟΝ ΕΞΑΝΑΚΙΩΝ. From Olbia come a beautiful polychrome Attic lecythus, a sixth century Ionic electrum pendant, two gold diadems, and a third century bronze statuette of Aphrodite. (G. VON KIESERITZKY, *Arch. Anz.* 1901, pp. 55-57.)

KERTCH. — **A Room with Paintings.** — In excavations at Kertch a long corridor was found, at the end of which was a room, containing a vase of artistic workmanship, several gold rings, and other objects belonging to the third century B.C. The walls were adorned with paintings representing scenes from the Greek myths. (*Berl. Phil. W.* February 16, 1901.)

OLBIA. — **An Ancient Archer.** — In *Jh. Oesterr. Arch.* I. IV, 1901, Beiblatt, pp. 57-60, E. v. Stern publishes an inscription from Olbia, now at Odessa. It reads:

Φημι διακοσίας τε | καὶ ὀγδοήκοντα ὀργυιάς
Καὶ δύο τοξέειναι | κλεινὸν Ἀναξαγόραν,
Υἱὸν Δημαγόρεω | Φύλτεω δὲ παῖδα ὀργυιάς κτλ.,

the rest being lost. Anaxagoras shot his arrow 501 m. Comparison with records shows this to be possible with a bow made of many pieces and well constructed, but not with the simple English nor with the Japanese bow. The contest in archery at Olbia was probably due to Scythian influence. In an appendix, pp. 61-70, Josef Karabacek gives and discusses the archery records on the columns of the Ok-meidân in Constantinople.

INSCRIPTIONS FROM THRACE. — In *B.C.H.* XXIV, 1900, pp. 147-169, G. Seure publishes Inscriptions from Thrace, beginning with a detailed discussion of the continental possessions of the Samothracian Deities. Two inscriptions on boundary stones refer to this sacred territory, which seems to have been the triangular plain, at whose extremities are Σάλη (Dedeagatch), Τέμπυρα (some six miles east), and Trajanopolis. The gift of this Samothracian territory to the Cabiri is probably due to the Romans, when in 46 A.D. Thrace was made a Roman province. The rest of the article contains inscriptions from the Thracian coast of the sea of Marmora, sepulchral, votive, and honorary. Four are in Latin. One in Greek from Panion is in honor of Eumenes II, his brothers, and Queen Stratonice. From Peristasis comes a boundary stone of the time of Diocletian, which is almost identical with *C.I.G.* 2018. In *Cl. R.* 1901, p. 84, G. F. Abbott publishes an inscription from Dedeagatch: ὅρος χώρας ἱερᾶς θεῶν τῶν ἐν Σαμοθράκῃ. The same inscription is published by P. N. Papageorgiu in *Berl. Phil. W.* June 1, 1901, with three others: a designation of a statue (?) as M. Aurelius Antoninus, from Dedeagatch, a late epitaph from Salonichi, and a dedication to Artemis Ma from Palaiokeastron.

GREECE

ACRAEPHIAE. — **Inscriptions.** — In *B.C.H.* XXIV, 1900, pp. 70-81, P. Perdrizet completes his publication of the 'Inscriptions of Acraephiae.' 1. An epigram in 16 lines from the pedestal of a statue of a certain Eugnotus, ilarch of Acraephiae, who fell in battle after displaying great bravery, probably in one of the battles against Poliorcetes. 2. A fragment of a decree in honor of Megarian arbitrators, who had settled a dispute between Acraephiae

and a neighboring village. The decree provides that it shall be set up near the altar of Zeus Soter, and as it was engraved on the pedestal of the statue of Eugnotus, it follows that this deity is the Zeus addressed in the epigram. 3. Fragment published in *C.I.G.S.* I, 2726. 4. Menestratus of Athens, whose signature was on the base of the bronze statue of the hero Ptoios, is known also as the maker of a statue of Heracles, and of the poetess Leocharis. Both these statues were in Rome, and it seems possible that his statue of Ptoios was also carried away, as the base was later used for a statue of Paranosmos. He seems to have lived in the fourth century B.C.

ÆGINA.—Excavations at the Temple.—In *Berl. Phil. W.* May 4 and 18, 1901, A. Furtwängler reports on the excavations at Aegina in April, 1901. The platform at the eastern end of the temple was laid bare. Near this were found a drain and cistern for rain water. Southeast of the temple a propylon has been found, consisting of two porticoes, each supported by two octagonal pillars. The northern (inner) portico opens out into a flight of three steps rising to the terrace of the temple. The propylon is of the same date as the temple. Parts of its roof tiles and a terra-cotta griffin of the same style as those of the temple were found. The following fragments of the pediment groups of the temple were found: a bearded male head wearing a helmet from the eastern pediment, probably belonging to No. 86 of Furtwängler's catalogue of the Munich Glyptothek; a helmeted beardless male head, probably belonging to No. 82, from the western pediment; various fragments of arms and legs; the left hand of the Athena of the eastern pediment; a right hand holding a stone, probably the hand of the fallen warrior in the middle of the western pediment. Parts of the griffins from the acroteria came to light. Six helmeted heads, three bearded and three beardless, may belong to the pediments, but it is not certain. At any rate, they belong to the same period, as does the lower part of a striding woman. The arm of an archer in Scythian costume may also belong to the pediment sculptures. Other sculptures are a much earlier female head and a girl's head of about 480 B.C. Some early terra-cottas and many lamps were found. A third boundary inscription of the precinct of Athena is now in the museum at Aegina. There is no reason to connect these inscriptions with the temple. The account is continued, *ibid.* June 1. The terrace east of the temple consists of a great collection of stones covered with the chips, etc., made in building the temple. Under this terrace remains of walls were found, some of which belonged to houses, others to larger buildings. Fragments of an earlier temple were found. The architectural forms are those of the developed Doric of the sixth century. Many fragments of vases not earlier than 500 B.C. and a variety of objects of earlier periods came to light. A few shards from Hellenistic vases with reliefs and a few Roman lamps were found, but the spot was deserted during the later classical time. Several blocks of the horizontal cornice of the temple were found, but they throw no light upon the arrangement of the statues. These excavations are described also by S. Reinach, *Chron. d. Arts*, May 11, 1901.

Discovery of an Ancient City.—In the Athenian newspaper *Kairoi*, June 18(=July 1), 1901, it is announced that the German excavators at Aegina have found extensive remains of a city of the sixth and fifth centuries B.C., perhaps Tripyrgia or Oea. A great underground aqueduct in which one can stand upright was also found. This is to be cleared at the joint expense

of the town of Aegina and the government. An archaeological museum may be built at Aegina.

AMORGUS. — **Decrees of Minoa and Aegialon.** — In *B.C.H.* XXIII, 1899, pp. 389–395, E. Cahen publishes two decrees now at Chora, the chief town of Amorgus. The first is a decree of the senate and people of Minoa in honor of Critolaus of Aegialon, and seems to belong about the middle of the second century B.C. The other is a decree of the senate and people of Aegialon in honor of the same Critolaus and his brother Parmenion.

ANDROS. — **Vases and Rings.** — At Andros geometrical vases and gold rings have been found. (*Berl. Phil. W.* June 1, 1901.)

ANTICYTHERA. — **The Discoveries of Greek Statues.** — In the *Independent*, February 28 and March 28, 1901, R. B. Richardson gives an account of the discoveries at Anticythera (see *Am. J. Arch.* 1901, p. 92), paying especial attention to the fine bronze statue of Hermes (?). He refers to the statement of Lucian, *Zeuxis*, p. 841, that a vessel carrying works of art from Greece to Rome for Sulla was sunk off Cape Malea, and thinks the treasures now discovered may have been in that vessel. The bronze statue is a most perfect work of art of a time probably after Lysippus. *Ibid.* March 28, G. P. Byzantinos describes the circumstances of the discovery. In *Chron. d. Arts*, March 2 and 9, 1901, S. Reinach has a description of the newly discovered statues. He also believes that they were sunk with Sulla's vessel. (Cf. *Monthly Review*, June, 1901, pp. 110–127; *Gaz. B.-A.* 1901, pp. 295–301; *J.H.S.* 1901, pp. 205–208; *Arch. Anz.* 1901, pp. 17–19; *R. Ét. Gr.* 1901, pp. 122–126; *C. R. Acad. Insc.* 1901, pp. 58–63, 158–159; *Athen. Mith.* XXV, 1900, pp. 457–461.)

ARGOS. — **A New Proconsul of Achaia.** — In *B.C.H.* XXIV, 1900, pp. 324–328, Th. Reinach publishes an inscription from Argos, which was on the pedestal of a statue erected to a proconsul Phosphorius. The name also occurs in *C.I.G.S.* I, 96, and has been assumed to refer to L. Aurelius Avianus Symmachus, father of the orator, who bore that name according to *C.I.L.* VI, 1698. It is certain that he was never proconsul of Achaia, and moreover the restoration of the walls of Greek cities can refer only to actions after the Gothic invasion of 267 A.D. It is probable therefore that the Greek inscriptions refer to Symmachus, proconsul in 319 A.D., who may well have been the first to assume this surname, and was possibly the father of L. Symmachus Phosphorius and grandfather of the orator.

ATHENS. — **Two Poetic Epitaphs.** — In *Jh. Oesterr. Arch.* I. IV, 1901, pp. 18–21 (2 figs.), A. Wilhelm publishes two epitaphs in the National Museum at Athens. The first, from Delos or Rheneia, was copied by Ludwig Ross and published by Karl Keil, *Arch. Zeit.* 1851, p. 285, and Georg Kaibel, *Epigrammata Graeca*, 214. It reads:

Δακρυόεν τόδε σῆμα καὶ εἰ κενὸν ἥριον ἦσται
 Φαρνάκου αὐθαίμον τ' αἰπὺ Μύρωνος ὁμοῦ
 τῆς Πάπου γενεᾶς οἰκτρᾶς ξένοι οὖς Ἀμιοσηνοῦ[ς]
 ναυαγούς Βορέου χεῖμ' ἀποσεισάμενους
 ἀγροίκων ἐπιφέεσσι Σεριφιάς ὤλεσε νήσος
 ἀμφὶ βαρυνζήλου τέρμα βαλοῦσα τύχης·
 πρῶτος δ' ἐν Ῥήνης κόλποις στηλῶσάβ' ἐταίρων
 τύμβον ἐπ' ἀστήνοισι μνημόσυνον στενάχων.

The second is without any indication of origin. It reads:

Δωρόθεε
χαῖρε.
Δ]ωρόθεον, ξένε, τόνδε σαόφρονα γαῖα κέκ[ευθεν
ἱ]ητρὸν βιοτὰν γήραι λειπόμενον,
ὅμ] ποτ' Ἀλεξάνδρεια λοχεύσατο πατρὶς ἀ[γῆτῃ
νειλόρυντος πάσης ἀψάμενον σοφίῃ[ς·
ἄστε[α δ' ἐλ]θὼν πολλὰ περιπλανίῃ, Τιθόρε[ια
πετροφ[υεῖ ψ]υχρῶι τῶιδε κέκευθε τάφω[ι,
ὥς ποτε μοιρίδιον τέλος ἤλυνθε καὶ γὰρ Ὀ[μῆρον
νῆσος ἔχει βαυὰ θεῖον ἀοιδὸν Ἴος.

Meeting of the German Institute.—At the meeting of the German Institute at Athens on Winckelmann's Birthday (December 5, 1900), Dörpfeld gave an account of the work of the Institute during the past year, and also spoke on Pergamon. Kavvadias spoke on New Cure-Inscriptions from Epidaurus. (*Athen. Mitth.* XXV, 1900, p. 471.)

Bronzes in Athens.—In *B.C.H.* XXIV, 1900, pp. 5-23 (14 figs.), A. de Ridder publishes Bronzes in the National Museum at Athens. This is the first of a series of supplements to his catalogue of the bronzes of the Archaeological Society, now in the National Museum, and discusses 11 figures. (1) Nude warrior from Andritsenia, of about 500 B.C. (2) Nude man advancing; the left arm is outstretched and held a shield; the right was probably raised, brandishing a lance. (3) An ephebus, holding a cock in the right hand; early fifth century. (4) "Apollo" forming the handle of a patera; a part of the attachment is preserved; about the middle of the fifth century. (5) Statuette of an Egyptian slave. It is not Egyptian work, but an ancient or modern imitation. (6) Curious ξάνον found near Lycosura. (7) "Aphrodite," a mirror support of the early fifth century. (8) Similar figure, probably of the second quarter of the fifth century. (9) A statuette from Arcadia, showing Artemis as huntress, in rapid motion, and drawing her bow. From the place of discovery it seems to be a dedication to Artemis Οἰνωάτις, and a provincial work of the middle of the fourth century. (10) A nude figure of Aphrodite, holding a sandal in her raised right hand. Such figures show three motives: (a) Aphrodite holding the *strophion*; (b) Aphrodite holding a *vitta* in token of her victory; (c) Aphrodite with the sandal, usually interpreted as an instrument for chastising Eros. It is rather the goddess threatening to punish any who revolt from her authority. (11) Tyche, wearing the polos, and holding in her left hand a cornucopia, in her right the handle of a rudder. The statuette is from Methana, and seems to be of the third century, so that it furnishes additional proof that the *πηδάλιον* as an attribute of Fortuna was not a Roman invention.

VARIOUS DISCOVERIES IN ATTICA.—*Athen. Mitth.* XXV, 1900, pp. 452-456, contains brief reports of various discoveries in Attica. Near the monument of Lysicrates has been found a grave and an inscribed marble slab. During the repairs on the Parthenon a pyxis, containing remnants of red paint, and a bronze support for a vase were found between marble blocks of the pediment. A private citizen has discovered in an old well a mass of vases, chiefly of the Roman period, resembling in form the Roman vases found in the Fayoum by Grenfell and Hunt.

Near the slaughter-houses southwest of Athens, the government has permitted private excavations, which have revealed a large graveyard on the Ilissus at the point where the middle long wall crossed the river. The burials seem to belong to the end of the fifth and beginning of the fourth centuries. The bodies were buried in wooden or clay coffins or in mere enclosures formed of marble slabs. The ashes were in bronze or clay vessels enclosed in larger marble receptacles. The vases were the usual lecythi, aryballi, and pyxides. Two fine lutrophori are mentioned. The bronzes included vases, plain mirrors, and two inscribed plates. Five stelae or marble vases have inscriptions, and others have reliefs or paintings. The excavations are to be continued, but as they are carried on by private enterprise the proper care in observation is often lacking.

In **Piraeus** an ancient conduit with three branches has been found. Also a Roman grave relief of good workmanship.

In **Ceratea** a peasant has discovered a marble hydria and a large marble grave relief. The hydria has a relief of a seated man before whom stand a man, woman, and child. The large relief is only partially preserved, but contains a seated woman behind whom stands a servant. Both monuments bear inscriptions. Excavations by the Ephor Skias in the **cave of Pan on Mt. Parnes** have brought to light dedicatory inscriptions, a relief, and votive offerings.

In the **Mesogaia**, east of Mount Hymettus, a peasant found a relief representing a woman holding a child on her arm. Beside her stands a youth. (*Berl. Phil. W.* June 1, 1901.)

The *Kölnische Zeitung* reports the discovery at **New Phalerum** of a part of a long wall, a marble lion, two stelae, and some fragments. (*Berl. Phil. W.* June 1, 1901.)

CARDITZA.—**A Statue of Aphrodite.**—Near Carditza a well-preserved statue of Aphrodite has been found, which is to be brought to the local museum. (*Athen. Mitth.* XXV, 1900, p. 466.)

CHALCIS.—**A Mosaic.**—In Chalcis a large mosaic representing athletes at exercise has been found. (*Athen. Mitth.* XXV, 1900, p. 457.)

CORINTH.—**A Foundation of Opus Incertum.**—In the course of the search this year (1901) at Corinth for traces of the odeum, a large foundation of *opus incertum* was discovered by the American excavators. It lies on a slight elevation forty-six metres southwest of the fountain of Glaucus. None of the trenches dug along this plateau have shown remains that can belong to an odeum, but the foundation discovered is sufficiently important to merit a preliminary description. A thorough excavation must be made later, but since the site is at some distance from the main area of work, further digging may be deferred.

The foundation is a massive platform 32.50 m. long, 13.70 m. wide, and about 3.50 m. deep. This is in part surrounded at the level of its base by a good wall of *poros* stone. The surface of the platform is nowhere far underground, and has little or no indication of the nature of the superstructure. Near the east end an irregular ditch is hewn in the top, and in this three *poros* blocks are set. Near the south side are four late graves likewise hewn in the foundation. These were full of bones when found. The vertical sides of the *opus incertum* are very uneven and can never have been visible.

Five trenches were dug, in one of which, at a depth of 3.54 m., is a layer

of fine cement 0.80 m. thick, extending under both the main platform and a nearly parallel wall of *poros* stone so embedded that its surface is even with that of the cement. The blocks in this wall are not clamped. Two small buildings are not of the same period as the *opus incertum*, one at least being earlier. The virgin soil was reached in a pit at the outer end of the trench at a depth of about 6.40 m. Close to the platform and half a metre above the cement was found a profile head and torso from a marble relief. The fragment (about 0.40 m. high) represents a youth wearing the skin of a panther, whose paws are tied at his throat. The work is crude and of late Roman date. Two small fragments of Latin inscription and numerous potsherds, mostly of rough red clay, were also found. A miniature Corinthian capital about 0.12 m. wide was found near the western side of the foundation. Some human bones, potsherds, and Roman lamps were found, as well as a second piece of marble relief, half a metre high, representing a draped, bearded man at whose back is a pilaster. The execution is very poor and sketchy.

Just what purpose was served by this foundation is not clear. One might like to find in it the foundation of the temple of Jupiter Capitolinus (Paus. II, 4, 5), but the distance and direction from the theatre seem to forbid such an hypothesis. (CHARLES H. WELER, in a letter from Athens, dated July 2, 1901.)

CRETE.—Monuments and Inscriptions.—In *B.C.H.* XXIV, 1900, pp. 222-246, J. Demargne publishes 'Monuments Figurés et Inscriptions de Crète,' being notes of a journey in Eastern Crete in 1898, followed by excavations in 1899 and 1900 at Goulas, which proved (1) that Goulas was not deserted after Mycenaean times; (2) that the existing remains are not Mycenaean but archaic; (3) that the name of the city was Lato. In the present article sixteen inscriptions are published. The first six are from Olous. The first is a long list of proxenoi and decrees conferring the proxeny; among the names the large number of Rhodians is noticeable, but not surprising in the first half of the third century, to which these decrees belong. The other inscriptions are honorary or votive, and include the dedication of a shrine to Apollo, from the fourth century B.C. The next six, from Itanos, are sepulchral or dedicatory. One dedication is to Zeus Soter and *Τύχη Πρωτογένης*, who seems to be the Roman Fortuna Primigenia, whose cult was associated with that of Jupiter. The thirteenth inscription is from Critsa (cf. *B.C.H.* XXIII, p. 635), and contains a dedication in elegiac distichs by a certain Timon to a deity, *Κυφαρίσσις Φακυλάνιος*. The deity seems to be the Cretan youth Cyparissus (Ovid, *Met.* X, 103-142). It seems likely that at this spot there was a shrine or cult of Cyparissus or possibly of Apollo. The remaining three inscriptions are a dedication to Athena, a sepulchral inscription, and a fragmentary dedication.

CHANIA (CRETE).—Graves.—In Chania, Crete, two Mycenaean rock-cut graves have been discovered containing gold and bronze rings, a mirror, and some smaller objects. Near these Roman graves have been found, yielding little except vases and bronze rings. (*Athen. Mitth.* XXV, 1900, p. 466.)

CNOSSUS (CRETE).—New Discoveries in the Palace.—In *Biblia*, 1901, pp. 121-128, Arthur J. Evans describes discoveries at Cnossus to May 18, 1901. The palace is even larger than had been supposed. The great entrance court must have been palace court and agora in one. The

west wall continued northward, and turned with two angles toward the east. After this it turned north again, enclosing a distinct quarter of the palace grouped about a small paved court with a portico. Near this was a basin or tank similar to the one near the throne room, but larger. Another smaller one has been found in another part of the building, and the Italian explorers have found two at Phaestus. In the northwestern part of the palace a new series of magazines, making eighteen in all, has been discovered. Some of these were very rich in their contents, and one contained one of the best deposits of linear tablets and a royal standard weight of red porphyry, weighing about sixty-four pounds. Evidence of the existence of an upper story was found in this quarter. Near the northwest angle of the wall a piece of stone frieze, with triglyphs and a half rosette in relief, and other architectural fragments were found, as well as remains of frescoes. In these the men wear long tunics and have shawls hanging from their shoulders. A lady is represented in a blue dress, looped in front and tied with bands like ribbons. The men carry vases of metal, and vases of metal shapes were found impressed upon tablets. In a fragment of a fresco relief are the thumb and forefingers of a man, holding a gold necklace with pendants of gold representing negroes' heads. An alabaster vase has the name and titles of Khyan, who ruled in Egypt in the early part of the second millennium B.C. Not far from this was a fine Babylonian cylinder of lapis lazuli, mounted with gold, and representing mythological subjects. The northern entrance is found to descend as much as eight courses. To the east of this and of the great court near the throne room a new region of the palace has been found. The court by the throne room was an interior court. Here magazines of various contents have been found. The palace was evidently a small town in itself, and unfinished work and unused materials show that workmen had their shops there. An ivory draught board, partly coated with gold, and with crystal bars and plaques backed with silver and blue enamel, was found. At one end of it were medallions, then a labyrinth of ivory and crystal, then four large jewelled medallions of ivory and crystal. The whole was enclosed in a frame of marguerites in relief of the same materials. Many clay impressions of Mycenaean seals were found. Among these is a creature with the fore part of a calf but human legs, seated on a throne. A series of impressions represents a goddess standing between two lions. Before her is a votary, while behind is a temple with two sacred pillars. At the south end of the central court some fragments of admirable painted reliefs were found. In *Biblia*, p. 144, a letter from Mr. Evans to the *London Times* is quoted, in which he mentions a suite of princely chambers with walls descending twenty feet and including remains of upper stories, a portico with eleven doorways, a hall with remains of a double colonnade and a triple staircase, a large deposit of inscriptions, apparently lists of officials, and colored plaster reliefs of magnificent realistic execution. The *Nation*, June 27, 1901, contains extracts from letters of Mr. Evans to the *Times* dated May 16 and June 12.

A Latin Inscription. — In the *Annual of the British School at Athens*, VI, 1899–1900, pp. 92–93, D. G. Hogarth publishes a Latin inscription: *Nero* | *Cl[a]udiu[s]* | *Caesar Aug. Germanicus Aesculapio iu- | gera quinque* | *data a divo Au[g.] | confirmata | a divo Cl[aud]i[o] | restituit [pro?] | C[olonia] I[ulia] N[obili] Cnos[o per] | P. Licinium [Caeci-] | n[a]m? proc.*

The original grant was probably made when Augustus settled Campanians at Cnossus (Dio 49, 14).

PSYCHRO. — **The Dictaeon Cave.** — In the *Annual of the British School at Athens*, VI, 1899-1900, pp. 94-116 (4 pls.; 24 figs.), D. G. Hogarth describes his discoveries at the Dictaeon cave. The cave, which lies above the village of Psychro, is double. In the upper grotto are remains of an early wall marking off a temenos. Numerous bronzes (over 500) and other votive objects were found. Especially interesting are the votive axes. The earliest pottery is Kamares ware, belonging to the latest pre-Mycenaean period. Mycenaean and geometric wares were found, but after the period of the geometric ware the cave seems to have lost its vogue. Many of the bronzes were found hidden in crevices of the rock in the lower grotto. The objects from the lower grotto belong to the later Mycenaean times, and the period immediately after, while the finer Mycenaean products were found in the upper grotto. A popular account of these discoveries is contributed by Mr. Hogarth to the *Monthly Review*, January, 1901, pp. 49-62; 10 pls.

PHAESTUS (CRETE). — **Excavations.** — In *Rend. Acc. Lincei*, 1900, pp. 631-636, Luigi Pernier gives the result of excavations at Phaestus, in Crete, conducted by the Italian archaeological expedition during the summer of 1900. The most important discovery was on the eastern hill of the three included in the ancient town. Here was excavated a great Mycenaean palace, similar to those of Tiryns, Mycenae, and Cnossus. The rooms are in general not large or well decorated, but retain traces of a rough stucco finish. There is an upper stratum of remains, but whether of Greek or Byzantine period is doubtful. Vases and domestic utensils of a very early period were found in great abundance.

DELPHI. — **The Accounts in the Archonship of Dion.** — In *B.C.H.* XXIV, 1900, pp. 124-146, E. Bourguet publishes 'Inscriptions de Delphes, — Les Comptes du Conseil sous l'archontat de Dion.' The accounts are carefully written, *στοιχῶδόν*, but the writing on the left side has been almost destroyed. The inscription is in three columns. It contains a statement of the balance, *τὰ ὑπάρχοντα*, at the disposal of the *ραμίαι* and on deposit in Delphi, the receipts for the spring pylaea, with the usual list of archon, prytaes, and hieromnemons, the total of receipts and balance according to the old standard, a detailed list of expenditures, which include items at Delphi and at Thermopylae, the total of expenses, the balance on hand at the beginning and end of the account, reckoned in amphictyonic money, the record of the exchange of a part of this for Attic silver, and finally the statement of the total amount on hand. In an illegible part of Col. II, the construction of an *ἱππάφεισι*, doubtless like that at Olympia, seems to be mentioned.

Two Theban Artists. — The Theban artists, Menecrates and Sopatros, who collaborated in the statue at Delphi of M. Minucius, conqueror of Scordistes (*B.C.H.* XX, 1896, p. 480), are associated in another Delphic inscription on the base of an unknown victor in the Pythian games. They worked at the end of the second century B.C. (*B.C.H.* XXIV, 1900, p. 81, note by T. H.).

Inscriptions. — In *B.C.H.* XXIII, 1899, pp. 486-510, E. Bourguet ('Inscriptions de Delphes: Décrets de Proxénie du IV^e Siècle') publishes twenty-five decrees of proxyeny of the usual form. The first nineteen con-

tain the names of archons whose dates are known, the others of undated archons. These latter can be dated approximately by the character of the writing and the occurrence of proper names known from other dated sources.

In *B.C.H.* XXIII, 1899, pp. 511-557 ('Inscriptions de Delphes'), Th. Homolle supplements the article of Bourguet by adding a number of inscriptions, for the most part conferring proxenies, which throw light on the chronology of the Delphic archons. I. Texts earlier than 275 B.C. *a.* New archons, six inscriptions. No. 1 adds an archon Thrax, and seems earlier than 370 B.C. No. 4 gives the *προμαντρία* to the Thebans, and the size of the letters and the special wording (*μετὰ Δ[ε]λφοῖς* | *πράτο[ις]*) seems to indicate a document of special importance, probably of the year 370 B.C. The archon seems to be either *Mnasidamos* or *Mnasilaidas*. *b.* Known archons, four inscriptions. *c.* Inscriptions without the names of archons, but containing *Bouleutae*; thirteen inscriptions. No. 15 is an award of proxyeny to Hippias the Mollossian, who seems identical with the saviour of King Pyrrhus in his childhood (*Plut. Pyrrh.* 2). *d.* Seven *στοιχηδόν* inscriptions not dated by Delphic magistrates. Nos. 24 and 25 are dedications of the Athenians at Samos to Apollo. Nos. 27 and 28 testify to the connection of Rhegium with Delphi. II. Texts of the third century dated by the names of archons. *a.* Inscriptions not *στοιχηδόν* on the border of the fourth and third centuries; four texts. *b.* Archons later than 278 B.C.; six texts. No. 35 is in honor of Glaucon of Athens, son of Eteocles and brother of Chremonides. He at one time commanded the garrison at Piraeus, and was famous for his victories at Olympia and elsewhere. No. 36 is in honor of Hierocles, son of Hiero, king of Syracuse, and like No. 35 seems to belong between 278 and 260 B.C. III. A proxyeny decree adds the name of Agesilas to the archons of the second century. It seems to belong about 140 B.C.

DIMINI.—*A Dome Tomb and a Palace.*—At Dimini, near Volo, Stais has discovered a dome tomb and remains of a prehistoric palace. Some small articles of "Mycenaean" art were found here, but the fragments of vases, which are numerous, have geometrical ornamentation. Sixteen stone axes were found. Thessaly appears to have had a "Mycenaean" civilization without "Mycenaean" vases, the old, native, geometrical ornamentation of vases being retained. This agrees with the theory that the chief seat of "Mycenaean" civilization was in the East, in which case Thessaly would be less exposed to "Mycenaean" influence than other parts of Greece. (SAM WIDE, *Berl. Phil. W.* June 22, 1901; cf. *ibid.* June 1.)

EPIDAUROS.—*Records of Cures.*—A stele with inscriptions relating to cures has been found at Epidaurus. (*Berl. Phil. W.* February 16, 1901.)

ERETRIA.—*Excavations.*—In Eretria the Ephor Kuruniotis has continued his excavations, chiefly in various cemeteries. Graves of the fifth century have yielded lecythi and gold ornaments. Graves of the seventh century have yielded two old Eretrian amphorae, and other early graves geometric vases, including one with the representation of a funeral procession. The excavation of a large Roman bath has begun, and to the east of Eretria it is thought may be found the sanctuary of Artemis Amarusia. (*Athen. Mith.* XXV, 1900, pp. 456-457.)

LUSOI. — Excavations at the Temple of Artemis. — In *Jh. Oesterr. Arch. I.* IV, 1901, pp. 1-89 (156 figs.), W. Reichel and A. Wilhelm give an account of the Austrian excavations at the temple of Artemis Hemera at Lusoi, in Arcadia, carried on in the spring and autumn of 1898 and June, 1899. The little that is known of Lusoi from ancient sources is brought together as an introduction to the account of the excavations. The ancient path to the temple was followed as nearly as possible. Besides remains of wall hard to identify, the temple itself and three other buildings were excavated. A fountain house with a basin 5.40 m. long and 2.60 m. wide, fed from a trough 2 m. long, 0.50 m. wide, and 0.35 m. high, was probably a building with a roof and a porch with columns or pillars. The gateway to the sacred precinct was a rectangular structure, 12.80 m. long and 6.90 m. wide, divided by a cross wall into a western porch, 5.60 m. by 5.80 m., and a somewhat smaller eastern porch at a higher level. Near the gateway are the remains of a rectangular building 15.50 m. long and 15.10 m. wide. It consisted of a portico 3.50 m. deep, and an inner room 14 m. long by 9.40 m. deep, in the back part of which is a semicircular wall. This may be regarded as a foundation for seats, and the building may be called the bouleuterion. The temple has a long hall on each side, and with these has a breadth of 20 m. and a length of 32 m. Each hall is 3.87 m. wide in the clear and extends from a point a little behind the anta of the pronaos almost to the anta of the opisthodomus. There is no indication of any entrance to these halls except from the cella. The central part of the temple consists of a pronaos 4 m. deep, a cella 17 m. long, and an opisthodomus 5.75 m. deep. Pronaos and opisthodomus had four columns between antae. The side walls of the cella were strengthened by buttresses, which were probably finished as simple pilasters in the halls, but projected into the cella, where they ended in half columns. The foundations of the temple and at least one course above the euthynteria were of stone, but the walls of sun-dried brick. The buttresses may have been of burnt brick. One complete triglyph and fragments of others show that the pronaos had triglyphs of marble, while those of the opisthodomus were of *poros* stone. Antefixes and terra-cotta acroteria were found in considerable numbers and are attributed to the roof of the temple. The central part of the temple doubtless had a gable roof, while the roofs of the halls were probably flat. The temple and the other buildings described belong to the fourth or third century B.C. Some architectural terra-cottas and a fragment of what was probably the cult statue point to the existence of an earlier temple, but no traces of its walls were found. A large Byzantine church once stood in the ruins of the temple where is now a small church of the Panagia. Many terra-cotta statuettes ranging in date from the geometric period to late times were found. Many of them are draped figures which seem to show that the temple statue was draped and held a deer in her hand. Many also represent animals. Marble fragments are comparatively few and unimportant. A fragment of the drapery of a somewhat primitive stone statue probably belongs to the cult statue in the temple. It probably resembled the small bronze from Lusoi, now in Paris, published by Furtwängler in the *Sitzb. Mün. Akad.* 1899, ii (cf. *Am. J. Arch.* 1901, p. 230). The Paris bronze is republished after Furtwängler. The bronzes found in the excavations are numerous, but of little importance. They are for the most part ornaments and utensils, fibulae, pins, fragments of sheath-

ing, and the like. Nine decrees of proxeny inscribed on bronze were found in or near the ruins of the temple. They are dated by the Damiourgou, with the exception of No. 6, which is dated by the Hieromnemon. Three other inscriptions are mere fragments. Eight other inscriptions from Lusoi are published. Of these a list of proxenoi on a bronze discus in Berlin, a decree of proxeny on a number of fragments of bronze in the hands of dealers, a thin three-cornered sheet of bronze with the words Ἀρ[τέμ]ιτος Ἡμέ[ρας] Δούσου and a thin sheet of bronze with the words Ἀγάθων ἀνέθηκε appear to be published for the first time. Two inscriptions referring to Lusoi (*Rhein. Mus.* XIV, 533, and *Inscriften von Olympia*, 184) are added. An appendix maintains the probability that decrees of proxeny and the like were inscribed on the jambs of the doors of temples and other public buildings, but were not deposited in the opisthodomus. This explains the meaning of φλιαί, Polybius XX, 11, 2. An index to the inscriptions is added.

MEGALOPOLIS.—**A Mosaic.**—At Megalopolis a fine mosaic has been unearthed on the floor of an antique gymnasium. It is ornamented chiefly with figures of beasts and birds, but in one of its corners there is a figure of Megalopolis represented as a goddess, with a three-towered mural crown upon her head and the cornucopia of Amalthea in her hand. (*Athen. May 18, 1901.*)

MEGARA.—**A Tablet with the Lord's Prayer.**—The National Museum at Athens has received a small clay fragment from Megara, which originally formed the lower right-hand corner of a tablet containing the Lord's Prayer. The characters show that it was written in the fourth century, and the text is in general that of the early manuscripts, including the omission of the Doxology. The tablet seems to have been prepared as a charm for the protection of a house or garden, or possibly for use on a specific occasion. It is too large for an amulet. (R. KNOPF, *Athen. Mitth.* XXV, 1900, pp. 313-324; 2 cuts.)

MYCENAE.—**Poros Sculptures.**—Five fragments of poros reliefs from Mycenae, apparently belonging to the metopes of the Doric temple of Athena, are published by K. Kuruniotis in *Jb. Arch. I.* XVI, 1901, pp. 18-22 (5 cuts). He compares them with the Apollo of Tenea and with the Sicyonian metopes at Delphi, and assigns them to the middle of the sixth century B.C.

RHODES.—**C. I. G. I, 122.**—In *B. C. H.* XXIV, 1900, p. 253, T. H. publishes from a squeeze an inscription from Rhodes Ἀριστος Ἐφέσιος ἐποίησε, in a single line, which he believes to be the correct form of *C. I. G. I.* I, 122.

SIPHNUS.—**A Museum.**—Mr. Dragatsis has founded a museum on Siphnus for preservation of local antiquities, and proposes to conduct excavations on the island. (*Athen. Mitth.* XXV, 1900, p. 466.)

SPARTA.—**A Relief representing the Dioscuri.**—At the Institut de Correspondance Hellénique, February 22, 1899, E. Cohen discussed an archaic bas-relief from Sparta, discovered in 1895, which represents the Dioscuri, facing one another, clad in the chlamys, and holding a spear in the left hand. Between them are the two large amphorae with pointed covers. In the gable of the stele is an egg with a serpent on either side. There is no inscription. The relief is flat, of the technique not uncommon in Spartan sculpture. It is the earliest complete votive relief

representing the Dioscuri, and the first to show the egg of Leda, which is otherwise known only through later texts. (*B.C.H.* XXIII, 1899, pp. 599-600; 1 cut.)

THASOS. — Inscriptions. — In *B.C.H.* XXIV, 1900, pp. 263-284, G. Mendel publishes forty-six brief inscriptions from Thasos, copied, for the most part, at Limena, during the summer of 1899. Nine are in the local alphabet, and seem to be earlier than 400 B.C. In connection with No. 22 is given a complete list of Thracian names occurring in Thasian inscriptions. A note contains a bibliography of Thasian inscriptions.

THERA. — Excavations in May and June, 1900. — In May and June, 1900, Hiller von Gärtringen continued his excavations at Thera. Many houses and walls of different dates were brought to light in the upper city. One complex structure contained two large halls with wall paintings on stucco resembling the first Pompeian style. A small sanctuary of a god of healing was found, and a few statues and inscriptions. Silver coins of the ninth century show that the city was inhabited after the volcanic disturbances of 726 A.D. The road from the Agora to the necropolis of Sellada was also studied in its entire course, and the Agora found to cover three terraces, separated by streets. On the middle terrace are the foundations of the temple of the Ptolemies and Caesar, and on the northern three exedrae, which are monuments to private citizens of about the time of Augustus. The other roads to Sellada were examined, and many graves and a number of archaic inscriptions cut in the rock on the road near the spring, now called *Ζωοδόχος πηγή*, were found. The results of the last two campaigns are to be published in a third volume of the work on Thera. The excavations have now been brought to a close. It is expected that a local museum will soon be built. (*Athen. Mith.* XXV, 1900, pp. 461-466.)

THESSALY. — Christian Inscriptions. — Under the title *Χριστιανικαὶ Ἐπιγραφαὶ Θεσσαλίας*, *B.C.H.* XXIII, 1899, pp. 396-416, N. I. Giannopoulos publishes a number of inscriptions from the eparchies of *Ἀλμυρός*, *Τρίκαλα*, *Τύρναβος*, and *Νεαὶ Πάτραι*, dating chiefly from the thirteenth to the nineteenth centuries.

VOLO. — Graves. — Near Volo five graves of soft limestone have been found. They probably belong to the necropolis of Iolcus. (*Berl. Phil. W.* February 16, 1901.)

ITALY

CEGLIE DI BARI. — Vases. — In *Not. Scavi*, 1900, pp. 504-506, Q. Quagliati describes several well-decorated vases found in a tomb at Ceglie di Bari; especially, an amphora with pictures of Perseus in a group of Sileni, and Dionysus with Maenads, and a hydria, showing Peleus and Thetis. *Ibid.*, pp. 506-511, M. Mayer discusses two other vases from the same place, — two amphorae, one with mythological scenes of uncertain meaning, the other showing the death of Thersites.

CIVITA DI PADULA. — The Site of Consilinum. — In *Not. Scavi*, 1900, pp. 110 ff., was reported the discovery of a fragmentary inscription, containing the name of the ancient town of Consilinum. The remainder of the inscription has now been found, and the site of Consilinum is proved to have been at Civita di Padula. (G. PATRONI, *Not. Scavi*, October, 1900, pp. 503-504.)

CORNETO.—**Tombs.**—Six tombs have been excavated at Corneto Tarquinia, two of which, of circular plan, are identical with tombs at Plemmyrium in Sicily, and are evidently of Sicel origin. (R. MENGARELLI, *Not. Scavi*, 1900, pp. 561-569; 7 figs.)

ESTE.—**Excavations and Various Discoveries.**—In *Not. Scavi*, 1900, pp. 523-551 (11 figs.), A. Alfonsi gives the journal of excavations at Este, in the garden of the Pia Casa di Ricovero, in the years 1895, 1897, and 1898. He describes the contents of 123 tombs, representing the four periods of the settlement at that place. *Ibid.*, pp. 285-290 (fig.), A. Prosdocimi reports the discovery at Villa Bartolomea of Gallic and Roman antiquities, which have been placed in the museum at Este. There are early Gallic vases, including one representing rudely, in relief, a human face; a vase of the Etruscan-Campanian type; Arretine ware; examples of the pure Roman type; glass vases; objects of bronze; coins of Augustus and Tiberius.

GELA.—**Various Objects.**—In *Not. Scavi*, July, 1900, pp. 272-284 (7 figs.), P. Orsi describes the following antiquities from Gela in Sicily. 1. Inscribed vase fragments recently come to light, one of which bears a dedication to Antiphemus; this was the founder of the town and there may have been a shrine dedicated to him in the locality of this discovery. 2. A sepulchral *cippus* of the fifth or fourth century B.C., about which is painted a ribbon, tied into a knot on one side. 3. The top of a *cippus* of the ninth century B.C., representing the entablature and roof of a small temple. 4. A sepulchral inscription. 5. Decorated terra-cotta sarcophagi.

GIANNUTRI.—**A Roman Villa.**—Recent excavations on the island of Giannutri are the subject of an article by G. Pellegrini in *Not. Scavi*, 1900, pp. 609-623 (2 figs.). The only ancient remains belong to a Roman villa, and it is evident that one household constituted the whole population of the island. The ruin hitherto regarded as a temple was the *belvedere* of the villa. Brick stamps and coins found here show that the buildings were erected toward the end of the first century after Christ and were used until sometime in the third century. The establishment probably belonged to the family of the Domitii Ahenobarbi. Some further details are given by Lanciani, *Athen.* June 15, 1901, where explorations on the island of Giglio are also briefly described.

NAPLES.—**A New Brotherhood.**—In *Not. Scavi*, July, 1900, pp. 269-270, A. Sogliano reports the discovery in Naples of an inscription, probably of the third century after Christ, which contains the name of an organization hitherto unknown—the Fretores Euboici (= Φρήτορες Εὐβοεῖς).

Coins in the Museum.—A collection of coins found in the province of Campobasso, on the site of Bovianum Vetus, has been acquired by the Naples Museum. It contains seventeen pieces of *aes grave* and 256 bronze coins of different Campanian cities, especially of Naples. After discussing at some length the Campanian coinage, E. Gabrici, in *Not. Scavi*, 1900, pp. 645-658, decides that the present collection was made about 250 B.C. The Naples Museum has received also a gold stater coined at Tarentum in the time of Pyrrhus, and a collection of 120 republican coins found at Licodia, near Catania.

POMPEII.—**Excavations in the Second Half of 1900.**—Excavations at Pompeii are described by A. Sogliano in *Not. Scavi*, 1900. In July the temple of Jupiter was cleared of antiquities which had been stored

there. Various inscribed fragments came to light, and amphorae with unedited inscriptions, all of which are published (pp. 270-272). In August, the excavation of Reg. V, Ins. IV, was continued, and the interior of the podium of the temple of Jupiter was thoroughly explored. Here are six large vaulted rooms, some with openings above, others entirely dark. The only entrance from the outside, on the east side of the temple, is not contemporaneous with the building. The original entrance was probably in the middle of the south side. An inscription found at Scafati mentions a duumvir, L. Piricatus, probably a magistrate of Pompeii (pp. 341-345; plan). In September, excavations were continued at three points — Reg. V, Ins. IV; south of the Basilica; on the Barbatelli estate, north of the town (pp. 409-410). In October, excavation was continued south of the Basilica, in Reg. V, Ins. IV, and on the Barbatelli estate. Among many small objects that were found may be mentioned an ornamented silver saucepan, and 187 bronze coins of the early empire (pp. 500-502; fig.). A fine bronze statue of a youth, 1.17 m. high without the base, was found at Pompeii, on the Barbatelli estate, in November, 1900. (Cf. *Am. J. Arch.* 1901, p. 104.) The excavations in this place during that month were remarkably productive of small objects. Work was continued also south of the Basilica and in Reg. VI, Ins. XV (pp. 584-603; 7 figs., showing the bronze statue). The article just cited includes a preliminary report of Salvatore Cozzi, on the results of the exploration of the Pompeian drainage system. The report is illustrated with two plans and seventeen figures. Excavations continued in December (pp. 238-239; 2 figs., representing a bronze vase mentioned in *Not. Scavi*, 1900, pp. 238-239).

Coins and Utensils. — In the Barbatelli estate, north of Pompeii, the skeleton of a man — evidently a fugitive from the eruption of 79 A.D. — has been found. When struck by death he was carrying, tied in a bundle by means of a cord (made of hemp), the following objects of value: an exquisite silver stewpan (*casseruola*), weighing 520 grammes, the handle of which is ornamented with shellfish and mollusks of various kinds; a soup-spoon with a broken handle, a spoon for mixing hot drinks, a silver penny of Domitian, and two keys. There were also, lying in a heap, 187 copper pence, the oldest dating from the time of Agrippa, the latest from the time of Titus. (RODOLFO LANCIANI, *Athen.* March 9, 1901. See above.)

ROME. — Discoveries in the Forum. — G. Boni, in *Not. Scavi*, August, 1900, pp. 291-340 (41 figs.), gives a preliminary statement of the exploration of the sanctuary of Juturna in the Roman Forum (cf. *Am. J. Arch.* 1901, p. 104), and a detailed description of the exploration of the Comitium. In the first locality, he mentions the following discoveries: The marble *puteal* of Juturna, inscribed with the name of M. Barbatius Pollio, curule aedile, 36 m. southwest of the temple of Vesta, the intervening space being occupied by the fountain and by various rooms dedicated to health divinities, used at first as an *incubatio*, later as a *statio aquarum*. The fountain, partially covered with a brick arch, below which a stairway descended to republican constructions of tufa. Republican arches of tufa, forming a series of rooms, above which a ramp descended from the Palatine. A large vaulted room of the time of Hadrian. A marble altar, with a female figure in relief. Fragments of a shrine in the form of a small temple. Various statues — all fragmentary — including one of Aesculapius, and an archaistic

statue of Apollo. A large marble altar, with figures in relief. Three pedestals, two of them inscribed. A small cippus, dedicated to the *Genius stationis aquarum*. Fragments of a marble fountain. Other objects placed here in the Middle Ages, including a marble sarcophagus. (Cf. LANCIANI, *Athen.* February 9, 1901.)

In the **Comitium**, the ancient entrance of the Curia has been uncovered. Inside the Curia, a pavement of porphyry and marble was found, and the end of an architrave, bearing a fragmentary inscription. In the front wall of the Curia were seven *loculi*, one of which contained a human skeleton. There was a tomb also in the nucleus of the steps, and on this rested a marble sarcophagus. On the small platform before the door were two sarcophagi of terra-cotta. At the eastern end of the steps was a republican well, containing vase fragments, small bronze objects, etc. Near this were found pieces of modelled stucco, probably belonging to the interior decoration of the building of Sulla or that of Caesar. The mediaeval travertine pavement of the Comitium was laid bare. On this was a pedestal dedicated to Maxentius, but originally dedicated by the college of carpenters in 154 A.D. It is suggested that this pedestal bore a column upon which stood the bronze wolf of the Capitoline Museum. The imperial pavement of marble slabs was uncovered. Southeast of the Curia was a mass of stones, including inscribed cippi, which had formed the foundation of a small tower. Resting partly upon the mediaeval, partly upon the imperial pavement, a circular area was excavated, paved with marble, and surrounded by a curb. Crossing the middle of this and parallel with the front of the Curia was a gutter, showing traces of lead pipe. Republican pavement, of travertine blocks, was found 0.47 m. below the imperial pavement. Under this was a tufa stairway, of five steps. Fragments of a republican inscription came to light, of a date perhaps as early as 184 B.C., being an advertisement for bids for certain improvements in streets. Between the level of the modern street and the virgin soil, a depth of 4.04 m., Boni has identified twenty-three archaeological strata, and to the description of these he devotes a large part of his report.

In *Not. Scavi*, 1900, pp. 569-573, V. Federici publishes an inscription of the African colony, *Iulia tertiadecima Uthina*, in honor of Augustus. The stone was found in the fountain of Juturna. He discusses also the inscriptions on four vases, found in the same place, assigning them to the sixth or seventh century after Christ.

The **Rostra** at the west end of the Roman Forum is thought by G. Boni to be the work of the Flavii, or, possibly, of Trajan. Eight arches that formed the *suggestum* of Caesar's rostra have come to light behind the later structure. Many architectural fragments of republican buildings have been found here. Near the Basilica Julia has been found a fragment of the *Forma Urbis*, showing a part of the Baths of Agrippa. It seems to belong to the original plan of Vespasian. (*Not. Scavi*, December, 1900, pp. 627-634; 6 figs.) In *Athen.* April 13, 1901, R. Lanciani states that the fragment of the plan belongs to the same period as the other known fragments, not to Vespasian's time. In *Athen.* May 25, 1901, Lanciani mentions the discovery of two or three sarcophagi under the floor of S. Maria Antiqua; of one or two *friulli* or dice-boxes; of a piece of *aes grave*, and of a stone hatchet, which was, however, not found in an early stratum.

In *Cl. R.* 1901, pp. 85-89 and 136-142, Thomas Ashby, Jr., gives an account, with some discussion, of the discoveries in the Forum during the second half of the year 1900.

The Baths of Caracalla.—The underground passages in the baths of Caracalla are already cleared to the extent of more than 1600 feet. In one passage two well-preserved marble statues larger than life were found. (LANCIANI, *Athen.* May 25, 1901.)

The Mausoleum of Hadrian.—The mausoleum of Hadrian and the castle of S. Angelo have been added to the list of historical monuments accessible to the public. The building is in part lighted by electricity. The apartment of Paul III will be turned into a museum, and excavations are in progress at the foot of the mausoleum to ascertain the details of its construction. (LANCIANI, *Athen.* May 25, 1901.)

A Statue of Peloponnesian Type.—On the 12th of March, near the corner of Via Lucullo and Via Sallustiana, at the depth of 38 feet, a headless statue was found, exquisitely carved in Greek marble of fine texture and rich tone. It represents a young woman wearing the Doric woollen peplum, sewn on the right side up to the height of the shoulders, with the apotygmata—namely, with the top of the peplum folded over all round. The figure belongs to a Peloponnesian type, produced, it seems, at the beginning of the fifth century B.C., of which several specimens have already been found, collected, and described by Amelung and Mariani (*B. Com. Roma*, 1897, p. 169; *Röm. Miith.* 1900, p. 181), the best preserved of the whole set being the one discovered at Castelli, the ancient *Kíraipos* in the island of Crete, and now preserved in the museum of the Syllogos of Candia. The new replica, which measures 5 feet in height without the plinth, was found lying among the remains of one of the edifices of the Sallustian gardens—built partly in the reticulated style, partly in "opus quadratum"—together with other fragments of statuary, several amphorae, and two whole columns, one of africano, fluted, one of cipollino, plain. (LANCIANI, *Athen.* June 15, 1901.)

Ancient Reliefs at San Saba.—In the work under and near the church of San Saba ten or fifteen sarcophagi have been found. One has a relief of Apollo and the nine Muses. Several fragments of architectural sculpture also came to light. (LANCIANI, *Athen.* May 25, 1901.)

Inscriptions.—At the Carmelite monastery in course of erection in the triangle between the Corso d' Italia, the Via Salasia Vetus (or Pincia), and the Via Salasia Nova, many inscriptions have been found. Among those recently discovered is one describing how a "collegium" was formed among the freedmen and servants of L. Tavius Rufus, under the presidency of a physician, Agrypnus; how he died at twenty-seven, and his mother (*mater calamitosa*) put up the tablet at her own expense. Another epitaph tells how a certain Grattius had been beaten and kicked to death by a ruffian to whom the victim wishes an even worse fate. Another tablet belongs to a banker, another to an engraver. (LANCIANI, *Athen.* June 15, 1901.) Ninety-four epitaphs from this place are published by G. Gatti, *Not. Scavi*, 1900, pp. 574-583.

Record of the Capture of a City.—In the Via dell' Aracoeli, opposite the Palazzo Astalli, a fragment of a stone pedestal has come to light, on which the words COSOLED . . . ONE CAPTOM can still be traced. It is but enough to allow us to classify this fragment with a special set of records

which commemorate the capture of Greek or Sicilian cities in the third century B.C. and the removal of their most celebrated works of art to Rome. The name of the conquered city cannot be made out in the newly found fragment; we only know that it ended with the letters . . . ONE. (LANCIANI, *Athen.* June 15, 1901.)

Tesserae.—In *Not. Scavi*, July, 1900, pp. 256–268 (24 figs.), M. Rostovtsev and D. Vaglieri publish 225 tesserae from the bed of the Tiber, seven from Ostium, one from Hadrian's Villa, and one from Tusculum, all of which are now in the Museo delle Terme. Some have not before been published.

Various Discoveries.—G. Gatti reports the following discoveries in Rome in *Not. Scavi*, 1900, pp. 254–256, 403–405, 498–500, 574–583, 626, and 634–635: pavements and fragments of walks in Via Cordonata, walls and sepulchral chambers near Ponte Sisto, pavements of marble slabs and mosaic in the Via Nomentana, and on the Via Portuense two epitaphs. At Via Sistina, No. 13, brick walls and mosaic pavements, belonging to ancient private houses. Under Via Pellegrino, an ancient street, following a course identical with that of the modern street. At Via della Lungara, No. 42, a terra-cotta sarcophagus. Outside Porta S. Paolo, near the pyramid of Cestius, remains of a tufa wall and a travertine *cippus*, with a relief and a dedication to Epona.

In the course of work on a passage under the Quirinal, several statues and architectural fragments have come to light. Between the Via Venti Settembre, the palace of the Ministero della R. Casa, and the public garden, a mosaic pavement has been found, which belonged to a Christian building of the third century. Another section of the ancient street under the Via del Pellegrino has been found. On the Via Salaria, near the establishment of the Carmelitani, sepulchral chambers have been opened, and many inscriptions, vases, lamps, etc., have been found, belonging to Christian burials of the second century.

Collections of Coins.—His Majesty King Victor Emmanuel III has recently purchased the Marignoli collection of over thirty-two thousand coins, of which three thousand are gold. This makes the king's collection the most valuable in the world. (LANCIANI, *Athen.* February 9, 1901.) The collection of Papal coins formed by the late Cardinal Randi has been purchased by Pope Leo XIII and added to the Vatican collection. It numbers about six thousand pieces. The municipality of Rome has formed a collection in the Palazzo de' Conservatori and intrusted it to the care of Camillo Serafini. It contains the Campana collection of gold coins, the Bignani collection, the Stanzani collection, and the coins collected since 1870 from municipal excavations. (LANCIANI, *Athen.* June 15, 1901.)

Purchase of the Ludovisi and Borghese Collections.—The Minister of Public Instruction, Comm. Gallo, has laid before the House three bills of great archaeological and artistic importance. The first concerns the purchase of the Ludovisi museum of statuary. The contents of the Ludovisi museum have already been removed to and temporarily deposited at the Museo delle Terme, but they will not be exhibited to the public until the bill has received the sanction of both Houses. The second concerns the purchase of the gallery of pictures and the museum of statuary belonging to the Borghese family, and of the Casino in which both are now preserved. The third

proposes the purchase of the Villa Borghese. The Ludovisi and the Borghese museums and gallery will be united under the same roof. (LANCIANI, *Athen.* February 9, 1901.)

The bill for the purchase of the Ludovisi statuary has been sanctioned by Parliament. (*Athen.* June 15, 1901.)

SALERNO.—**A Natural Cavern with Prehistoric Remains.**—In *Mon. Antichi*, IX, 1901, pp. 545–616 (72 cuts), G. Patroni describes his exploration of the Grotta di Pertosa, in the province of Salerno. Beside comparatively modern Graeco-Roman remains, he found a curious pile-structure and other evidences of habitation by a prehistoric people of the early bronze or stone age, closely allied to the Siculan population traced elsewhere in Southern Italy. He dates them at 2000–1750 B.C.

SARSINA.—**A Bath.**—A large building, probably a bathing establishment, was excavated in the town of Sarsina in 1898. It is of the republican period, with restorations and additions of later times. (A. NEGRIOLI, *Not. Scavi*, September, 1900, pp. 395–401; plan.)

SYRACUSE.—**Caves near Scala Greca.**—In *Not. Scavi*, August, 1900, pp. 353–387 (plan; 32 figs.), P. Orsi describes in detail caves on the road leading north from Scala Greca, near Syracuse, and objects recently collected in or near them. It is evident that some of them were used for religious purposes. One has a basin in the centre which contained the sacrificial fire, and rectangular indentations in the walls, into which pictures had been set. Outside are benches which served as seats for worshippers or as shelves for votive offerings; also an altar, cut partly from the natural rock. Hundreds of fragmentary terra-cotta figures were found of the fourth and third centuries B.C., nearly all showing the attributes of Artemis—bow, lance, various animals, etc. It is evident that there was here an important cult of Artemis. An occasional attribute of Aphrodite indicates her association in the cult.

TARANTO.—**Prehistoric Remains.**—In *Not. Scavi*, September, 1900, pp. 411–464 (2 plans; 22 figs.), Q. Quagliati gives a detailed account of excavations near Taranto, at the Scoglio del Tonno, in 1899. Three archaeological strata were found, the highest yielding vase fragments of the Mycenaean period, the middle containing abundant remains of a settlement of the *terramaricoli*, the lowest offering traces of dwellings of the neolithic period. The second stratum, which is by far the most important, gives evidence of two successive settlements, and the greater part of this article is given to a minute description of the houses, means of defence, etc.

TERRACINA.—**A Mooring Stone.**—In *Not. Scavi*, December, 1900, pp. 635–638 (2 figs.), R. Mengarelli describes an ancient mooring stone in the form of a lion, found some time ago at Terracina. It is thought to mark the principal entrance of the ancient harbor.

VASCIANO.—**A Statue of a Goddess.**—In *Not. Scavi*, July, 1900, pp. 251–254 (fig.), A. Pasqui discusses a statue found in a bath recently excavated on the hill of Vasciano, near Todi. It is a seated female figure of the best period of Roman art, and has characteristics of the Borghese Juno of the Vatican and the statue of Juno found in the Palatine Stadium and now in the Museo delle Terme.

VETULONIA.—**Tombs and their Contents.**—In *Not. Scavi*, October, 1900, pp. 469–497 (39 figs.), I. Falchi gives the result of excavations at

Vetulonia in the autumn of 1898 and spring of 1899. Several very productive tombs were discovered, some of them surrounded by rings of stone. The tombs contained gold and silver fibulae and ornaments, bronze utensils in great variety, bronze and terra-cotta vases, etc. Most interesting are several horses' bits of elaborate form, a decorated bronze shield, several necklaces, and a bronze file.

VITERBO. — A Necropolis. — Near Viterbo, on the hill called Talone, tombs have been opened in a necropolis, which is not earlier than the fourth century B.C. The most interesting discovery is two *cippi*, — one inscribed, the other representing an Etruscan tomb. (R. MENGARELLI, *Not. Scavi*, September, 1900, pp. 401-403; 2 figs.)

VARIOUS MINOR DISCOVERIES. — In *Not. Scavi*, 1900, are reports of various excavations and discoveries of minor interest.

In the autumn of 1899, unimportant excavations were carried on west of **Bene-Vagienna**, on the site of **Augusta Bagiennorum** (pp. 389-392; plan). Various ancient remains existing in the country of the **Bruttii**, especially a walled enclosure near **Pietrapaola**, which is thought to be an ancient acropolis, are described (pp. 604-607; 2 figs.). Between **Chiusa** and the village of Vayes a neolithic settlement has been partially excavated (pp. 521-523). A. De Nino makes a report of his investigation of the ancient aqueduct of **Corfinium** (pp. 642-643). Several tombs have been opened at **Cumae**. The results were unimportant (p. 409). The discovery of an Etruscan necropolis at **Foiano**, near the old convent of S. Francesco, proves the existence of a town in this locality. Several vases found in these tombs are described by G. F. Gamurrini (pp. 624-626). South of **Girgenti**, in the locality called Balatizzo, recent investigation has proved that there was a Byzantine town of the fifth, sixth, and seventh centuries (pp. 511-520; 2 figs.). A very ancient tomb, containing several vases, has come to light near **Grottaferrata** (pp. 405-409; 7 figs.). Three mosaic pavements, probably belonging to the same house, have been found at **Imola** (pp. 249-251; 3 figs.). On pp. 551-553, G. F. Gamurrini publishes several inscriptions found in the territory of the ancient **Mevania** and now preserved at **Bevagna**. At **Racalmuto** in Sicily have been found several inscribed tiles, used for marking sulphur. They are of the reign of Commodus, and show the letters in high relief and in reverse order (pp. 659-660; fig.). Recent discovery of ancient pavement and walls at **Susa (Segusio)** throws some light on the history of the town (pp. 465-467). At **Mt. Timmari**, in the district of **Matera** in Apulia, remains of a settlement and necropolis of the early iron age have come to light, the most significant discovery being several cinerary urns (pp. 345-353; 4 figs.). A primitive necropolis has been discovered at **Moruzzo**, near **Udine** (pp. 392-394).

FRANCE

BOIS DES BOUCHAUDS (CHARENTE). — A Gallo-Roman Well. — In *R. Arch.* XXXVIII, 1901, pp. 1-9, G. Chauvet describes the contents of an ancient well excavated in November, 1900, in a field near the Bois des Bouchauds, not far from Angoulême. Remains of animals, a rude seated statuette of uncertain sex, some pottery, and many objects of metal were found. The metal objects are such as were used in Roman worship. Evidently there was a temple at this place, which was probably the Ger-

manicomagus of the Peutinger map. The objects found in the well were thrown in at a time of violence, the date of which is uncertain.

CHANTILLY.—**A Rediscovered Altar.**—P. Herrmann reports that he has identified, in the collection at the Château de Chantilly, which has been presented to the Institut de France by the Duc d'Aumale, a "lost" altar of the Four Seasons which is published from a drawing, in Robert's *Antike Sarcophagreliefs*, Vol. II, p. 3. He notes some slight inaccuracies in the drawing. (*Jh. Arch. I. XVI*, 1901, p. 38.)

SAINT-ÉTIENNE-DES-LANDES.—**The Hoard of Coins.**—The hoard of silver coins of the Gallic tribe Volcae-Tectosages found September 3, 1899, at Saint-Étienne-des-Landes near Périgord (*Am. J. Arch.* 1901, p. 108), is described and discussed by V. Luneau in *R. Num.* 1901, pp. 36-44. The coins found within the broken jar and scattered about it number more than fifteen hundred pieces, mostly very well preserved, and principally of the type known as "*à la croix*," with no trace of Greek or Roman influence. Close by was found an iron axe, of the usual Gallic type, carefully hidden in a receptacle formed of six flat stones.

DISCOVERIES OF ANCIENT COINS.—*R. Num.* 1901, p. 118, records the following discoveries of ancient coins in the confines of ancient Gaul: (1) At **Oissel** in the forest of Rouvray, on May 3, 1899, a vase full of coins of the Roman emperors from Trajan to Saloninus. (2) At **Angincourt** (Oise), where not long ago was found an amphora with fifty-four hundred imperial coins in bronze (see *Am. J. Arch.* 1901, p. 108), there was discovered early in 1900 another vase containing one badly worn *denarius* of the early Empire, and forty-nine billon *antoniniani* of the third century, from Gordianus III to Postumus. (3) At **Wecken-les-Dixmude** in eastern Flanders, eight *sestertii* of Gallienus, two *antoniniani* and a small bronze coin of Saloninus, and sixty-four pieces of Postumus. (4) In the spring of 1899, seventy-four *denarii* of the Republic, including one of Julius Caesar, and two *oboloi* of Massalia were unearthed at **Neustadt an dem Haardt** in the Rheish Palatinate.

GERMANY

A FEDERATION FOR THE STUDY OF ROMAN GERMANY.

—In April, 1900, a federation of societies interested in the study of Roman Germany was formed at Frankfort, the objects of which are (1) the representation of these societies in the proposed "Reichskommission für römisch-germanische Alterthumsforschung," and (2) a systematic coördination of local works and of publications. Sixteen societies have joined, and reports are to be presented annually. The federation expects to coöperate with the Archaeological Institute. (*Arch. Anz.* 1900, pp. 198-199.) The title of the federation is "Verband für römisch-germanische Alterthumsforschung." The first meeting was held at Treves, April 11 and 12, 1901, and numerous interesting papers were read.

BERLIN.—**Babylonian Tablets and Seals.**—A collection of two hundred and three Babylonian contract tablets, dated in the reigns of kings of the Chaldaean and Persian dynasties (from Nebuchadrezzar to Darius), and seven seal cylinders, have been acquired by the German Orient Committee for the Royal Prussian Museums of Berlin. (*HILPRECHT*, *S. S. Times*, January 26, 1901.)

Bronzes from Boscoreale. — A large collection of bronzes from Boscoreale, chiefly from the triclinium of the villa in which the silver treasure was found, has been acquired by the Berlin Museum. The pieces, including a couch-frame, candelabra, a lamp-rest, a lantern, many ornamental vases, cooking vessels, etc., together with some glass and pottery, are described and illustrated by E. Pernice in *Arch. Anz.* 1900, pp. 177-198; 27 cuts.

Director of the Pergamene Collections. — Professor H. Winnefeld has been appointed director of the Museum for the new "Pergamenischen Sammlungen" in Berlin. The Museum has been erected at a cost of 850,000 marks, and is to be opened on July 1 this year. (*Athen.* January 26, 1901.)

Meetings of the Berlin Archaeological Society. — April meeting. A. Conze reported on the recent work at Pergamon, chiefly the thorough excavation of one of the city gates and the finding of a second market of the kingly period, and at Haltern (Aliso) where an extensive Roman camp has been discovered outside the town. Following him, Dahm spoke on Aliso as an important supply depot for the army in the field, as shown by landings, warehouses, and jars, and on the reconstruction of the decuman gate, a structure of wood and earth dating probably from 11 and 10 B.C. A discussion ensued between Schuchhardt and Dahm, on the Teutoburg and the scene of the defeat of Varus, the former supporting the claims of the Grotenburg near Detmold, on the ground that this was certainly a pre-Roman burg, and the latter maintaining that Tacitus's reference to the *Teutoburgensis saltus* was too general to guide us to the place of the battle. (*Arch. Anz.* 1901, pp. 92-98.)

May meeting. Kekulé von Stradonitz compared the newly found bronze ephebus from Pompeii with the Idolino at Florence and the Berlin Sabouroff bronze. Assmann spoke on the Dipylon ship, differing from Bauer and Pernice, and giving reasons for considering it a bireme and of Phoenician origin. Zahn, discussing A. Evans's 'Mycenaean Tree and Pillar Cult,' interpreted the three-room shrine of the fresco and gold plate as a famous temple with cella, pronaos, and opisthodomus, and pointed out Mycenaean use of a middle line of columns. (*Arch. Anz.* 1901, pp. 98-99.)

June meeting. O. Rossbach discussed the Seleucid sanctuary at Aeolic Cyme and its sculpture, now in Constantinople, especially two large heads of Apollo and Artemis, comparing a head, probably of Stratonice, wife of Antiochus, which has been called a Tiberius. T. Wiegand presented some new combinations of the Typhon and Triton pediments of the Acropolis. O. Rubensohn discussed the Nymph relief of Paros, and A. Trendelenburg roused a discussion about the age of the great altar of Zeus at Olympia and the interpretation of Paus.^v, 13, 8. (*Arch. Anz.* 1901, pp. 99-101.)

TRIER (TREVES). — **A Roman Temple.** — The latest report issued by the Provincial Museum at Trier gives an account of the excavation of the remains of a Roman temple at Naundorf in the Hochwald. It belonged to a Roman settlement where seven large buildings, scattered at some distance from each other, had already been the site of excavations. Quite a crowd of finds were brought to light upon the south side of the temple, consisting chiefly of votive offerings in terra-cotta, of which more than one hundred figures are in excellent preservation. They mostly represent female deities, and still show traces of their original coloring. Some of them hold a little dog, others a child, others fruit in their hands. Amongst

eight bronze statuettes found four are said to represent Mars, one Jupiter, and one Mercury. The Museum reporter believes that so large a discovery of terra-cotta votive figures has never hitherto been made in any part of Southern or Western Germany. (*Athen.* March 23, 1901.)

A New Contorniate.—The museum of Trier (Treves) has recently acquired an unpublished *contorniate* found in the ruins of *Augusta Trevirorum*. On one side, a charioteer, labeled TIMENDVS is driving a *quadriga*; and on the other, between two altars, stands a victorious charioteer with his whip in his right hand and a palm branch in his left. The inscription is KALORONE NIKA (sic). (*R. Num.* 1901, p. 122.)

AUSTRIA-HUNGARY

APULUM (KARLSBURG).—A New Fragment of *C. I. L. III, 7741*.—In *Jh. Oesterr. Arch. I. IV*, 1901, Beiblatt, pp. 3-8, A. v. Domaszewski publishes a new fragment of the inscription relating to the *schola speculatorum* at Apulum. This and other inscriptions from the fortress of Karlsburg are discussed.

DOS TAVON.—An Etruscan Inscription.—In *Jh. Oesterr. Arch. I. IV*, 1901, Beiblatt, pp. 1-2 (fig.), I. de Campi publishes an Etruscan inscription on a grave-pyramid in the court of the Villa Canestrina, at Dos Tavon in Val di Non (Tyrol). He reads it *rileke : sa*. He gives the text of six other Etruscan inscriptions from Tyrol previously published.

ARCHAEOLOGY IN CROATIA.—The *Vjesnik* of the Croatian Archaeological Society of Agram (Zagreb), Vol. V, 1901 (264 pp.; 145 figs. 4to), contains numerous illustrated articles in the Croatian language. The subjects are in part anthropological rather than archaeological. Some Latin inscriptions possess interest for those whose special study is the history of the Roman legions or of Pannonia and Dalmatia. A catalogue of coins from Gordianus III to Valerianus Junior, found in Croatia and Slavonia, is given by J. Brunsmid, pp. 235-242. The numerous works of sculpture described and illustrated are of little general interest. A series of Roman lamps from Osijek (Essek), published by Celestin Vjekoslav (pp. 21-43; 21 figs.), offers several inscriptions, some of them apparently the names of the makers, and some interesting shapes.

GREAT BRITAIN

ROMAN REMAINS IN GREAT BRITAIN.—In *Jb. Arch. I. XVI*, 1901, pp. 80-81 (2 cuts), F. Haverfield reports briefly on the excavations of 1900. They include *castella* at Richborough (Kent), Cardiff, and Gelligaer (Wales), and Lyne, near Peebles (Scotland), and several portions of Hadrian's Wall, which appears to have had two distinct periods, the first marked by a turf wall, the second by stone.

LONDON.—Acquisitions of the British Museum in 1899.—Egyptian: Statues, stelae, altars, etc., of various kinds of stone, from about 3700 B.C. to late Christian times; wooden and ivory figures, coffins, jars, inscribed scarabs, seals, jewellery, and many small objects of a wide range of date; a collection of objects from graves of the pre-dynastic races.

Babylonian: Several hundred Babylonian tablets, some with deeds and plans of estates; four inscribed bricks of about 4500 B.C.; seven inscribed or engraved seal-cylinders, down to about 600 B.C.; two bronze figures.

Greek and Roman: By gift, nearly seventy numbers, objects in terra-cotta, gold, silver, ivory, bronze, and pottery. By purchase, twenty-eight numbers, including four famous cameos from the Marlborough gems (one measuring $8\frac{1}{4} \times 6$ inches, with busts of a Roman emperor and empress or Ammon and Isis); a marble hoplite head, perhaps copied from Cresilas; seven important vases, geometric, black-figured and red-figured, most of which have already been published.

Excavation in Cyprus: Contents of an unripped tomb on a Mycenaean site, a gold diadem, carved cylinders, vases, bronze implements, terra-cotta figures of Graeco-Phoenician period, glass, ivory, alabaster.

British: Roman tessellated floor from Hampshire, with Roman name-inscription, the only known instance; Roman inscribed sepulchral slab; ivory statuette of a Roman gladiator; enamelled bronze cock; various small articles. (*Arch. Anz.* 1900, pp. 211-216.)

CORNWALL. — **A Hoard of Roman Coins.** — F. Haverfield describes in *Num. Chron.* 1901, p. 209, a large hoard of Roman coins found in Cornwall in 1869 but never before published. Two laborers came upon three stones so arranged as to enclose a tin jug fastened with a wooden plug. In this jug they found no less than 2500 small bronze coins of the third century. The hoard was at once divided, but Mr. Haverfield is able to account for and describe 2099 pieces representing fifteen reigns from Valerian to Probus. There are no noteworthy types.

INCHTUTHILL. — **A Roman Camp.** — Under the direction of the Antiquarian Society of Edinburgh, some extensive excavations are being carried out at the Roman Camp at Inchtuthill, near Blairgowrie. The district is rich in memorials of the presence of the Romans, and some fragments of their weapons, besides some entire utensils and a Roman bath, have already been unearthed. Inchtuthill is believed to have been the station *in medio* to which, Tacitus says, Agricola led the troops after the battle of Mons Grampus. The camp was capable of containing 11,000 men on the Polybian system, and 29,000 on the Heginian. It was defended by a stone wall $9\frac{1}{2}$ feet thick, and this wall is now being laid bare, showing the camp to have enclosed fully forty acres in a circular form. (*Athen.* March 23, 1901.)

AFRICA

RECENT ARCHAEOLOGICAL WORK IN NORTH AFRICA. —

I. TUNIS. — Discoveries at Carthage include a quay around the island of the north lagoon, a long mole enclosing a stretch of water farther south, the burial-ground of the fifth and fourth centuries B.C., between the earlier and later ones, and an odeum of the time of Tertullian, with foundations and portions of the statues and upper structure. The catalogue of the Musée Lavigerie, in three parts, Punic, Roman, and Christian, gives a survey of the civilization from the seventh century before to the seventh after Christ. Punic remains show an early connection with Spain and Sardinia, and a mode of burial which survives among the Arabs of to-day. Two fourth-century reliefs are among the best works of Christian sculpture. Two small monuments similar to the Punic mausoleum at Dugga, a square pedestal resting on steps and surmounted by a pyramid, have at the corners the same Ionic pilasters in the original, Oriental form, with upright volutes. The new museum at Susa (Hadrumentum) has important mosaics, one in Pompeian

fresco style. The ship mosaic at Tunis and the numerous portraits are perhaps copied from book illustrations. The topography of Hadrumetum, Thapsus, Tacape, of the peninsula of Cape Bon, and even a military post far out in the Sahara have been investigated. At Haidra (Ammaedara) are inscriptions relating to the local cult of Saturn. Study of the ancient hydraulic system goes on. The disappearance of forests seems to account for the present lack of water. The antiquities of Tunis were very fully represented at the Paris Exposition of 1900.

II. ALGERIA.—The archaeological work here is newly organized under the charge of S.Gsell. Part VI of the description of the ruins of Timgad deals with the baths, the best preserved that are known, and the houses, which are of the Roman villa type, without atrium. Thubursicum, in the territory of Constantine, promises to repay a similar thorough excavation. All through this region, Roman houses, theatres, baths, basilicas, and cemeteries, as well as Byzantine fortifications, are being found and studied. Punic remains are less common, but include some sculpture. The Punic Baal and Tanit appear in Graeco-Roman form, and a cult of a special form of Hermes is found in inscriptions. The Celtic Epona has also strayed in. A fine bust found at Philippeville is perhaps a copy of the "Eubuleus" at Athens. In a private collection in Constantine are some rare Vandal ornaments. (A. SCHULTEN, *Arch. Anz.* 1901, pp. 64-80; map; 5 cuts.)

MORSOTT AND KISSA.—**Excavations.**—The *Berl. Phil. W.* February 23, 1901, states on the authority of the *Vossische Zeitung* that in the excavations of the year 1900 at Morsott and Kissa in the province of Constantine, the thermae were entirely excavated, an arch of triumph, the entrance of a large building, and a Roman house of nine rooms were found. The mosaics discovered are several square metres in extent. Waterworks, drains, and oil mills were found.

CARTHAGE.—**A Painted Sarcophagus.**—It was reported at the last session of the Académie des Inscriptions in Paris that Bishop Delattre had lately discovered in the Punic Necropolis near Saint Mouique a large sarcophagus of white marble, which bears traces of painted decoration. (*Athen.* May 25, 1901.)

UNITED STATES

BOSTON.—**Acquisitions of the Museum of Fine Arts in 1900.**—In the annual Report of the Trustees, pp. 25-95, the Curator of Classical Antiquities, Edward Robinson, gives a detailed description of the acquisitions of his department in 1900. He says of them: "The original objects acquired during the year comprise nine marbles; the beautiful Tyszkiewicz bronze statuette of Aphrodite, and five small objects in bronze; forty-two vases, five Arretine moulds, thirteen terra-cottas, a small but wonderful collection of Greek and Roman coins, and four miscellaneous objects. The marbles are all small, and include two statuettes, six heads (one of limestone), and one relief. The most important of them is No. 1, a copy—the most complete known—of a new type of Apoxyomenus, which was identified only a few years ago. The terra-cottas include four statuettes, two fragments of small altars, two antefixes, two lamps, one mask, and two moulds,—one of a mask, the other of a small altar.

"The vases are the most remarkable lot we have had in any year since the collection was begun. Almost every one is a masterpiece of its kind; and

whether as illustrations of the beauty of the Greek potter's art, or for the mythological or archaeological interest of the designs upon them, they will greatly increase the value and reputation of our collection. Where each specimen deserves especial mention, it is impossible in a summary to give an idea of their varied interest. The most important are perhaps the two cylices, Nos. 17 and 18, by Erginos and Aristophanes, which have additional value for their possible association with the sculptures of the Parthenon. Other artists who are represented by fine examples of their work are Nikosthenes (and Pamphaios?—No. 6), Duris (Nos. 8 and 9), and the 'Master with the Twig' (12)." The list is as follows:

SCULPTURES IN MARBLE.—1. *Statuette of an Apoxyomenus*. Described by P. Hartwig, *Berl. Phil. W.* 1897, pp. 30 ff. The type of the figure in Florence, *Röm. Mith.* 1892, pl. iii, pp. 81 ff.; AMELUNG, *Führer durch die Antiken in Florenz*, No. 25. Cf. FURTWÄGLER, *Masterpieces*, p. 261, fig. 108. It is to be published soon by Hartwig in *Jh. Oesterr. Arch. I.*—2. *Statuette of a Young Woman*. Work of the fourth century B.C. Good execution. The pose, type, and drapery suggest the Tanagra terra-cottas of the same period.—3. *Archaic Female Face*. This is the fragment of a head which has been split in two just in front of the ears. An original work of the second half of the sixth century B.C., probably of a Doric school.—4. *Small Head of a Woman*, of a fourth century type. A fragment, broken off at the neck.—5. *Small Head of Athena Wearing a Helmet*. This is a fragment, broken off at the neck. The figure was apparently in intense action. Hellenistic work, or later.—6. *Small Head of a Barbarian*. Later Hellenistic or Roman period. A realistic portrait of a man in middle life. It is a fragment, broken off at the junction of the neck and shoulder, but probably belonged to a bust, not a statuette.—7. *Head of a Youth*, wearing a Phrygian cap. In high relief, almost full front. It is now affixed to a modern background of serpentine. The style is late.—8. *Fragment of a Small Roman Relief*. This includes the lower right-hand corner of the relief and contains the upper half of the figure of an old, smooth-shaven man, reclining on a couch and holding a cup. Over his left hand hangs a knotted cord with clusters of what look like rings fastened to it. At the head of the couch is a tree with a smaller tree or vine twined round it, the two bound by a fillet. The man's head in high relief and modelled realistically with great detail. The rest of the work is flatter.

LIMESTONE SCULPTURE.—9. *Small Archaic Head of a Youth*, of early type, probably not later than 550 B.C.

BRONZES.—1. *Statuette of Aphrodite*, formerly in the Tyszkiewicz collection, published by Froehner, *La Collection Tyszkiewicz*, pls. vi and vii; Loewy, *Mon. Antichi*, I, 1892, p. 965. The goddess is nude, with both hands held in front of her. A remarkably beautiful work, but probably of Hellenistic times.—2. *Small Steelyard*.—3-6. *Four so-called Bow-pullers*.

VASES.—i. *Black-figured Style*. 1. *Amphora*. Forman collection, Sale Catalogue, No. 312. Poorly engraved in GERHARD, *Auserlesene Vasenbilder*, I, pl. 1. On one side the birth of Athena, on the other a quadriga.—2. *Amphora*, with double interior and two spouts. The decorations are in three bands, the main one just below the handles, the second on the shoulder, the third below the main one. (A) Main Band, Departure of a Warrior; Shoulder, Warriors and Youths on Horses. (B) Main Band, Theseus and the Minotaur; Shoulder, Combat of Warriors. (A and B) Lower

Band, Boys on Horses and Warriors. The purpose of the double interior must have been either to warm or to cool liquids. — 3. *Mug*, of late black-figured style, in the form of a negro's head. The lip of the vase, which rises from the top of the head, is decorated with figures of Dionysus and Satyrs. The negro's hair is represented plastically with small points, painted red. His eyes are painted black and white, with red pupils. The lips and eyebrows are painted red. — ii. *Red-figured Style*. 4. *Small Saucer-shaped Dish*, of early severe style. Interior Thetis ($\geq \exists T \exists \oplus$) and four dolphins, two of which she holds in her hands. The vase belongs to the cycle of Epictetus, and has some resemblance to the work of Kachrylion. — 5. *Cylix*, of early severe style. Forman collection, Sale Catalogue, No. 337. Possibly by Hischylos. Interior, youth examining an arrow. The drawing is exquisite. Inscription $\kappa\alpha\lambda\acute{o}\varsigma$. — 6. *Large Cantharus*, of early severe style, signed $\text{NIKO}\geq\Theta\text{ENE}\geq \text{E}\rho\text{OIE}\geq\text{EN}$. Published by Reisch, *Röm. Mith.* 1890, pp. 322–331; *Wiener Vorlegeblätter*, 1890–1891, pl. 7 (cf. *Jb. Arch. I.* 1892, p. 160; *Arch. Zeit.* 1884, p. 238; KLEIN, *Meistersignaturen*, No. 76). Two bands of decorations: (A) Main Band, Dionysus and Satyrs; Lower Band, Heracles and the Nemean Lion. (B) Main Band, Scene of Libation over an Altar, perhaps performed by Dionysus himself; Lower Band, Youth struggling with a Bull. The painter was probably Pamphaios. — 7. *Cylix*, of early severe style, probably by Euphronius. Interior, a Satyr, holding a rhyton. Exterior, (A) Three Dancing Youths. (B) A similar scene. — 8. *Cylix*, signed by Duris. Published *Röm. Mith.* 1890, pp. 332 ff., and HARTWIG, *Meisterschalen*, pl. xxi. Interior, a nude youth holding a discus in his left hand. Exterior, (A) Three Combatants. (B) A similar scene. Inscriptions, Interior, $\Delta\text{OPI}\geq \text{E}\Lambda\text{PA}\text{O}\geq \text{E}\Lambda$; exterior, on side A, $[+A]I\text{RE}\geq T[\text{PA}]T\text{O}\geq \text{KA}\text{LO}\geq$; on side B, $[+A]I\text{RE}\geq \text{TRATO}[\geq] \text{KA}\text{LO}\geq$. On the bottom of the foot are scratched the letters A Y . — 9. *Cylix*, signed by Duris. Interior, Dionysus holding a cantharus over an altar. Exterior, a dance of Satyrs and Maenads, in two groups of five figures each. Published by Tarbell, *Am. J. Arch.* 1900, pp. 183 ff. Inscriptions, $\Delta\acute{o}\rho\iota\varsigma \epsilon\gamma\gamma\alpha\phi\acute{o}\sigma\epsilon\nu$ and $\text{H}\iota\pi\pi\omicron\delta\acute{\alpha}\mu\alpha\varsigma \kappa\alpha\lambda\acute{o}\varsigma$. — 10. *Lecythus*, of severe style. Subject, A Woman Arranging her Hair. The style suggests Duris. — 11. *Lecythus*, of severe style. On the front a winged figure, Pothos, floats to right playing a double flute. — 12. *Large Cylix*, by the "Master with the Twig." Published by Hartwig, *Meisterschalen*, pls. lxxiv, lxxv; pp. 674–677. Interior, A Maenad and three Satyrs. Exterior, (A) Six Men in Conversation; (B) Two Warriors, two Women, a bearded Man, and a Youth conversing. — 13. *Mug*, unsigned, but probably by Brygos. Forman collection, Sale Catalogue, No. 361. A nude youth dancing before a draped female flute-player. — 14. *Stamnos*, of early fine style. (A) Dionysus in combat with a Fallen Giant. Two Maenads approach. (B) Two Satyrs drawing a Third in a Chariot. — 15. *Crater (oxybaphon)*, of fine style. From the Castellani and Tyszkiewicz collections. Published in *Monumenti dell' Instituto*, XI, pl. lxii, 1. (A) The Metamorphosis of Actaeon. Actaeon, Artemis, Lyssa (Madness), and Zeus are identified by inscriptions. Above Actaeon is the word $\text{E}\upsilon\acute{\alpha}\lambda\omicron\nu$, which appears to be a "love-name." (B) A Youth conversing with two Women. — 16. *Crater*, with volute handles, of fine style. (A) Apollo, Artemis, and Leto. (B) Three Women sacrificing at an Altar. — 17. *Cylix*, signed by Erginos and Aristophanes. This and No. 18 are described by Körte in *Arch. Zeit.*

1878, p. 114. The subject of the interior is the Rape of Deianeira by Nessus and her rescue by Heracles, all three persons being designated by inscriptions. Below are the artists' inscriptions, 'Εργίλος ἐποίησεν and 'Αριστοφάνης ἔγραφε (not ἔγραφσε as Körte says). On the exterior is the Battle of the Centaurs and Lapiths at the Wedding of Peirithous. There are on each side of the handles three pairs of combatants. Each person, Theseus, Peirithous, and the rest, is designated by an inscription. Style and composition closely resemble those of the following. — 18. *Unsigned Cylix*, decorated with the same subjects as No. 17, and probably by the same hand. Interior, Nessus, Deianeira, and Heracles. Exterior, Battle of Centaurs and Lapiths. Each person is designated by an inscription. The drawing shows no trace of the severe style. Epigraphical and stylistic arguments lead to 440-430 B.C. as the probable date of these vases. The groups of Centaurs and Lapiths show marked similarity to some of the metopes of the Parthenon. — 19. *Small Fragment in the Style of Aristophanes*. Head and shoulder of a draped woman. — 20. *Oenochoe* of later fine style. Published in *Strena Helbigiana*, pp. 111 ff. Three figures, Kraipale, holding a cup and a thyrsus, a Satyr named Sikinnos, and a female figure, Ephymnia. — 21. *Oenochoe*, of the middle period of the fine style. Probably Apulian work, in imitation of Attic ware. Io, represented with the body, horns, and ears of a cow, and the face of a woman, is walking to right. Beside her is a bearded man, Argus, who brandishes a club at Hermes, a young man with caduceus and sword. — 22. *Ribbed Cylix*, of late fine style. Interior, Sparta (Ξ[Γ]APTH) dismounting from a horse. The first known vase representing the nymph Sparta. — 23. *Small Amphora*, of developed fine style. On one side a draped seated woman; on the other Eros, wearing a wreath and holding a casket. — 24. *Oxybaphon*, of the earlier Apulian style. From Canosa. Published by Jatta, *Ann. d. Ist.* 1879, pp. 24-27, pl. D.; cited by Roscher, *Lex. Myth.* pp. 2448-2449. (A) Athena trying the double flute in the presence of Marsyas and others. (B) A thiasus, two Youths, a Maenad, and a Satyr. — 25. *Stamnos and Cover*, of early Apulian style. (A) Theseus deserting Ariadne. Athena and Hypnos, represented as a boy with large wings on his shoulders, are present. (B) Bellerophon taking leave of Proetus. Pegasus and Sthenoboea are present. — 26. *Small red-figured Lecythus*, probably of South Italian manufacture. The chief design represents a small Satyr jumping from a chair toward a large Satyr who prepares to catch him. — 27. *Apulian Lecythus*. The principal design represents the nuptials of Menelaus and Helen. A youth and a maiden on the back of the vase have no connection with the main group. — 28. *Small Trick Amphora*, of late red-figured style, either Attic or South Italian. Forman collection, Sale Catalogue, No. 347. It has no base, but the spherical body ends in a small, perforated knob. The decoration consists of animals fighting. The vase has a false interior, a hole in the bottom, and an air-hole on the underside of one handle. It can be made to appear full or empty at will. — 29. *Apulian Rhyton*, in the form of a griffin's head, with beak, erect, pointed ears, and a comb. — iii. *Polychrome Vases*. 30. *Lecythus*, with polychrome figures of the period of transition between the black-figured and red-figured styles. On the front are three figures, a Scythian pursuing two nude hetaerae. — 31. *White Alabastron*, with colored decorations in the style of Pasiades. Published in the Sale Catalogue of the Forman collection,

No. 366. Principal decoration, three draped women, one of whom is dancing. Inscriptions: *προσαγορεύο* and *παῖς καλός*. — 32. *Covered Cyliz*, with a picture of Apollo and a seated Muse on the top. — 33. *Small White-ground Cyliz*, of the early fine red-figured period. Extremely thin ware. The interior covered with white pipe-clay, except a medallion in the centre, in which a woman with streaming hair is represented in the usual red-figured style. — 34. *White Lecythus*, of the fine style. From the Paton and Blacker collections. Exhibition Catalogue of the Burlington Fine Arts Club for 1888, pl. xx, No. 120. Principal decoration: A youth and a maiden meeting at a grave. — 35. *Lecythus*, of the later fine style, with polychrome figures. A woman seated on a rock holds a basket of fruits or cakes which she has apparently just received from Eros, who kneels before her. At the right is a seated youth with a spear. — 36. *Lecythus*, with decorations in relief. The reliefs, six figures in groups of two, represent a scene of the Fall of Troy. At the right Ajax is rushing upon Cassandra, who clings to the Palladium. This group is very ill preserved. The central group represents a young warrior in Phrygian costume raising a fallen nude comrade. The third group represents two youths in violent combat. The figures are all beautifully modelled and recall the sculpture of the school of Phidias. The bright colors with which they were colored have almost disappeared. — 37. *Plastic Lecythus*, in the form of a group representing the birth of Aphrodite. Aphrodite kneels in a shell. The corners of her floating mantle are held by two flying Erotes, tall slender boys with long wings. The modelling is fine. The colors are all baked in, and have a hard, lustrous surface. The colors used are white, yellow, pink, blue, and cherry, besides gold. The probable date is early in the fourth century B.C. — 38. *Bell Crater*, of early Apulian style. Forman collection, No. 370. On one side is a comic actor wearing the mask of a bearded old man, on the other a fully draped woman. — iv. *Miscellaneous Types*. 39. *Small Plastic Vase*, covered with bright green glaze, in the form of a bird with human head. The head has Egyptian characteristics, but is probably not Egyptian work. The body has two pairs of wings. — 40. *Bucchero Cup*, the body supported by four female figures which stand upon a circular base. One has a pair of long wings. All are nude to the waist. Their resemblance to women on works of "Mycenaean" art is unmistakable. — 41. *Cylindrical Cup*, of pale brown clay, covered with a white slip. The ware is thin and hard. The only decorations are indented lines and, on the bottom, concentric circles in relief.

ARRETINE WARE. — 1. *Fragment of a Large Bowl*. The chief decoration consists of two winged female figures playing on musical instruments. Inscription PERENNI. — 2. *Mould of a Large Bowl*, decorated with masks of satyrs, thyrsi, rosettes, etc. Inscriptions RASIN and QVARTIO. — 3. *Mould of a Bowl*, decorated with garlands, lizards, birds, insects, and cupids, besides circles of dots. Inscriptions PANTAGATHVS (with ligatures) and RASIN. 4. *Mould of a Cup*. Five panels separated by lines, festoons, etc. In three panels are dancing youths, in the fourth a draped woman, in the fifth two draped women, one of whom plays a stringed instrument. Inscriptions M. PEREN and TIGRANI. — 5. *Mould for the Base of a Vase*, decorated with garlands and conventionalized pomegranates. — 6. *Black Vase*, decorated in Arretine style, but probably made in Southern Italy, perhaps at

Puteoli, in the first century B.C. The decoration consists of egg patterns, columns with festoons between, and masks.

TERRA-COTTAS. — 1. *Large Statuette of Eros wearing the Lion Skin of Heracles*. Found at Myrina. Described in *B.C.H.* XVII, 1893, p. 182. Eros is a chubby infant with small wings, dressed in a lion skin far too big for him. This figure shows the strong influence of Alexandrian art upon the later potters of Myrina. — 2. *Large Statuette of Eros as God of Plenty*. From Myrina. Eros wears a fawnskin and a chlamys, has a wreath on his head, with a jewel in front reminding one of the disk flanked by serpents of the Egyptians. He also has rings on wrists, ankles, and one thigh. He carries a cornucopia and a phiale. — 3. *Small Statuette of a Nude Young Girl*, stooping or kneeling. Found at Alexandria, and formerly in the Hoffmann collection. Published in his Sale Catalogue, 1899, No. 314, pl. ix, and in the catalogue of his Egyptian Antiquities, 1894, No. 494, pl. xl. The modelling is very delicate, and the figure was modelled by hand, not pressed in a mould. — 4. *Fragment of a Statuette of Eros*. This includes the neck and torso, part of each arm, and the greater part of the thighs. The pose is identical with that of the Capitoline Eros bending his bow. On the shoulders are two slits for the insertion of wings. — 5. *Circular Antefix*, with the head of Medusa, full front, in relief. The type is transitional between the later archaic and the beautiful. The colors, yellow, red, pink, and black, are well preserved. — 6. *Antefix*, of the Southern Italian style of the late fourth or third century B.C. The front has in relief a head of a young, beardless man in full front. He wears a lion skin cap. Probably Heracles is intended. — 7. *Small Mask of a Bearded Satyr's Head*. Probably dating from the early part of the fifth century B.C. — 8. *Small Mould of a Bearded Satyr's Face*. — 9-10. *Fragments of Two Small Altars*, of fine Greek workmanship. On one is the youthful Dionysus, embraced by a nymph and supported by a satyr; on the other, two draped women, one of whom is about to crown a trophy. — 11. *Fragment of the Mould of a Small Altar*. A girl is standing with a vase in one hand and her other hand at her shoulder. A tall man rests his hand on the girl's shoulder. — 12. *Small Lamp*, of late Greek type. On the top a bust of young Pan, in full front. — 13. *Small Lamp*, of late Greek type, in the form of a negro (?) dwarf, squatting upon a wineskin.

COINS. — A remarkable collection of 466 Greek and Roman coins, selected for their artistic interest. Only 23 are Roman, and these are, with one exception, imperial types, with admirably preserved portrait heads. The Greek coins are from all parts of the Hellenic world, from Southern Italy to Egypt. Especially fine, on account of their remarkable preservation, are a decadrachm of Syracuse, by Euainetus (unsigned), and a tetradrachm of Agrigentum.

MISCELLANEOUS. — 1. A modern gold ring, set with an onyx cameo, representing the mask of a bearded old man. — 2. A Roman ring of meteoric iron, set with a red jasper, in which is engraved a figure of Cupid. Rough work. Found at Metz. — 3. A Roman pick and a piece of lead pipe, both from Chester, England.

REPRODUCTIONS. — Reproductions of the reliefs of the two long sides of the "Sarcophagus of Alexander" from Sidon have been made in oil colors by Joseph Lindon Smith, and are to be exhibited in a plaster reproduction of the mouldings of the original. The only casts added are six from Arretine moulds in the British Museum. A list of casts for sale is appended.

BYZANTINE, MEDIAEVAL, AND RENAISSANCE ART

GENERAL AND MISCELLANEOUS

JERUSALEM. — A Mosaic. — In *C. R. Acad. Insc.* 1901, pp. 223-225, a mosaic is described which has been found in the Jewish quarter north of the Damascus gate of Jerusalem. In the middle is Orpheus with his lyre. Below him are a centaur and a horned satyr, and he is surrounded by various animals. This picture is surrounded by a border with various representations. In another panel are two female figures with the inscriptions *Θεωδοσία* and *Γεωργία*. (Cf. *Chron. d. Arts*, 1901, p. 124.)

THE MOSAICS OF DAPHNI. — In 1899 G. Millet published a volume entitled *Le Monastère de Daphni: Histoire, Architecture, Mosaïques*. This is the first of a series of *Monuments de l'Art byzantin*, for which M. Diehl will contribute *Le Monastère de Saint-Luc*, M. Millet will write concerning the churches and frescoes of *Mistra*, and M. Laurent will make known the *Peloponnèse chrétien*. In the *Gaz. B.-A.* 1901, pp. 359-375, E. Bertaux writes concerning the mosaics of Daphni. These mosaics belong to the most brilliant period of Byzantine Art, when the influence of classic forms and Oriental color was strong, and before monasticism had subjected art to mechanical rule.

NICOSIA. — The Monastery of St. Domenic. — At Nicosia, in the island of Cyprus, there have been discovered the substructures of the monastery of St. Domenic, where the kings of Cyprus, a son of St. Louis, and other illustrious persons were buried. A portion of the cloister of the fourteenth century resembling that at Lapais has been brought to light. (*C. R. Acad. Insc.* 1901, pp. 160-163; *R. Art Chrét.* 1901, p. 245.)

ITALY

FIVIZZANO. — The Robes of Nicholas V. — It is not generally known that the church of Fivizzano near Spezia possesses the pontifical robes worn by Nicholas V at the ceremony of the canonization of San Bernardino of Siena. They were presented to the Augustinian monks of this church by Pope Gregory XIII. (*R. Art Chrét.* 1900, p. 519.)

FLORENCE. — S. Ambrogio. — The church of S. Ambrogio, Florence, which has for some time been closed for repairs, has been reopened. This little-visited church contains two monuments of importance, a marble altar-piece by Mino da Fiesole, dated 1481, and a fresco by Cosimo Roselli, painted in 1486. (*R. Art Chrét.* 1901, p. 143.)

The Collection at S. Maria Nuova. — The works of art belonging to the hospital Santa Maria Nuova have been purchased by the government for 495,000 lire. The paintings will go to the Uffizi and the sculptures to the Bargello. Amongst the paintings are works by Spinello Aretino, Fra Bartolomeo, Filippo Lippi, Lorenzo Monaco, Andrea del Castagno, Botticelli, Albertinelli, Cosimo Roselli, Van der Goes, and Memling. Amongst the Sculptures is a Madonna by Luca della Robbia. (*R. Art Chrét.* 1900, p. 517.)

A Façade for San Lorenzo. — The church of San Lorenzo is at length to have a façade. The jury, consisting of four architects, a painter, a sculptor, and art critic, have received 70 designs and have rejected all but three. A new competition will be held before the final decision is made. (*Chron. d. Arts*, 1901, p. 132.)

ORISTANO.—**Discovery of a Statue by Nino Pisano.**—In a store-room of the old monastery of S. Francesco at Oristano in Sardinia has been discovered a statue of a bishop, inscribed *NINVS : MAGISTRI : ANDREE : DE : PISIS : ME : FECIT.* (*R. Art Chrét.* 1901, p. 142.)

PAVIA.—**Relics of St. Augustine.**—The body of St. Augustine, which reposed for centuries in the reliquary made by Bonino da Campiglione in the church of S. Pietro in Ciel d'Oro, at Pavia, and which, after the Napoleonic wars, was transferred to the cathedral, was replaced in its old resting place on September 30, 1900. The reliquary, adorned with 290 statues of saints and allegorical figures has been restored. (*R. Art Chrét.* 1901, p. 89.)

PISA.—**The Campo Santo.**—Owing to the dampness from the walls, the frescoes of the Campo Santo are an object of solicitude. The frescoes to which Benozzo Gozzoli devoted sixteen years of his life are now suffering, perhaps from the varnish applied to them some years ago. A special commission of experts has been appointed to take efficient measures for the preservation of these famous frescoes. (*R. Art Chrét.* 1901, p. 243.)

ROME.—**Frescoes in the Castel S. Angelo.**—The restorations now being carried out in the Castel S. Angelo have resulted in the discovery of some frescoes of the fifteenth century. It is hoped that the frescoes by Pinturricchio, representing the members of the Borgia family, may yet be recovered. (*Am. Architect*, June 1, 1901.)

Frescoes discovered at St. Cecilia.—During the restoration of the choir of St. Cecilia, Rome, there have been discovered frescoes representing Christ enthroned. Above are eight angels, four on each side. To the right are the Virgin kneeling and St. Paul and five Apostles. To the left St. John Baptist, St. John Evangelist, and four Apostles. The Apostles are seated. The frescoes are undoubtedly, as stated by Vasari, by Pietro Cavallini (1260-1344). This artist is represented by mosaic paintings in Sta. Maria in Trastevere, Rome, by an Annunciation at S. Marco, Florence, and an altarpiece in the Accademia, Florence, and a Crucifixion in the lower church at Assisi. (*R. Art Chrét.* 1901, pp. 88, 241-242.)

San Saba.—The excavations at San Saba have discovered a small basilica, the pavement of which lies five feet below that of the present church. The walls were covered with frescoes in better style than those of Sta. Maria Antiqua, but of these little is left. (*LANCIANI, Athen.* May 25, 1901.)

Sta. Maria Antiqua.—The church of Sta. Maria Antiqua, discovered first by Lucrezia Collino in 1526, and again by Giovanni Andrea Bianchi in 1702, has now been completely excavated. In the chapel or oratory which opens on the left of the apse a set of interesting frescoes has been laid bare, representing the Redeemer on the Cross, according to the style of early Christian art, viz., not in the abandonment of agony, but alive as the Master of death, as the One who "*oblatus est quia ipse voluit.*" In the panel below we see the Virgin Mary with the Divine Infant on her knees, between the figures of the Apostles Peter and Paul and of Quiricus and Julitta, the reputed victims of the persecution of Diocletian. On the extreme left there is an excellent likeness of Pope Zacharias, taken from life, and accordingly surrounded by a *square* nimbus; we know, therefore, that the panel must have been painted in the lifetime of that Pope, not later, at all events, than 752 A.D., which is the year of his death. On the opposite side another living

person is represented, offering to the Virgin Mary a model of this same church. The inscription says: ".....Theodotus the chief of the Defensores, and administrator of the Church of the Mother of God the Holy Mary, called the Antiqua." This dignitary of the court of Pope Zacharias (December, 741-March, 752) was the chief of that body of officers called "Defensores," which practically has survived to the present day under the name of "Consistorial Advocates"; and he was at the same time administrator of the patrimony belonging to Sta. Maria Antiqua, the oldest among the Roman churches dedicated to the Virgin. The model which he holds in his hands is characteristic, because the sacred building is not covered by a pointed roof—as becomes a Christian church—but by a vaulted ceiling; and the inner hall of the Augusteum, which was dedicated to St. Mary the Old, was actually covered by a ceiling of that kind.

The best piece of evidence in connection with the name and the history of the building is to be found in a fragment of one of the *ambones*, dug out two weeks ago, which is inscribed with the legend,

+ IOHANNES . SERVVS . SCAE . MARIAE,

of which there is also a Greek translation

(+ ΙΩΑΝΝΟΥ ΔΟΥΛΟΥ ΤΗΣ ΘΕΟΤΟΚΟΥ).

This important document refers to Pope John VII, who occupied the chair of St. Peter from March, 705, to October, 707, and who, according to the 'Liber Pontificalis,' "basilicam Sanctae Dei Genitricis, quae antiqua vocatur, pictura decoravit, illicque *ambonem* noviter fecit." Pope John VII turned some of the rooms of Caligula's palace, adjoining the nave of this church, into his own episcopal residence, where he passed his last days and died on October 18, 707. (R. LANCIANI, *Athen.* February 9, 1901.)

URBINO.—**Jacomo di Maestro Piero.**—The earliest known painter of Urbino was a certain Giuliano who flourished in 1366. The second in point of date has recently become known through local archives. His name was Jacomo di Maestro Piero. He flourished from 1411-1434 and painted a St. Jacopo, a Crucifixion, and the Standard or Banner for the Brotherhood of St. Antonio Abbate. (*R. Art Chrét.* 1901, p. 142.)

SPAIN

SOCIEDAD ESPAÑOLA DE EXCURSIONES.—In the *R. Art Chrét.* 1901, pp. 246-247, E. Roulin presents a general notice of the *Boletín* of the Sociedad Española de Excursiones for 1900. It contains many articles of interest to archaeologists, among which may be mentioned the articles on panel paintings and on foreign paintings in the Prado by N. Sentenach, on Romanesque sculpture in Spain, and on sculptures of the twelfth and thirteenth centuries by E. S. Fatigati, and on Byzantinism in Spanish Christian architecture by V. Lamperez.

EXPORT OF SPANISH WORKS OF ART PROHIBITED.—Spain is the latest country to follow Greece and Italy with a law against the export of antiquities without a special permit. Owners of antiques that have any reference to the history of Spain or Spanish art are to enter the titles of their treasures in a register. Manuscripts, books, medals, and costumes, musical instruments, weapons, inscribed stones, carvings, statuettes, paintings, pottery, porcelain, and brasses are included in the index. (*Am. Architect*, 1901, p. 40.)

FRANCE

BAYONNE.—**The Musée Bonnat.**—M. Bonnat has presented a portion of his collections to the recently established museum at Bayonne. Amongst the paintings are a Rembrandt, three by Van Dyck, a Tintoretto, and a Poussin. (*Chron. d. Arts*, 1901, p. 34.)

CUNAUT.—**A Romanesque Tower.**—In the *R. Art Chrét.* 1901, p. 512, L. Cloquet publishes a drawing of an interesting Romanesque tower at Cunaut in the Touraine. It is embedded in the north side of the nave, although it evidently formed the central tower of an earlier church.

PARIS.—**Japanese Painting at the Paris Exposition.**—In the *Gaz. B.-A.* 1901, pp. 27-39, 105-122, Émile Hovelacque treats of Japanese painting at the Paris Exposition. For the early period he bewails the lack of examples and the absence of accurate information. From the imperial household comes an authentic work of the seventh century, Corean in character, representing the warrior saint and sovereign Shōtōkon-Taishi. From this there is a gap of several centuries to the painting by Yeshin Sojo of the tenth century, representing the followers of Buddha. The masters of the fifteenth, sixteenth, and seventeenth centuries were more abundantly, though inadequately, represented.

Important Tapestry for the Louvre.—An important Flemish tapestry of the fifteenth century valued at 70,000 francs has just been presented to the Louvre. The composition, attributed to Quentin Matsys, represents the Last Judgment. The border of fruits and flowers is in a perfect state of preservation. (*R. Art Chrét.* 1901, p. 271.)

Illustrations of the Works of Petrarch.—At the meeting of the Académie des Inscriptions, October 27, 1900, E. Müntz read a chapter of a book on which he is engaged, treating of the illustrations of the fourteenth and fifteenth centuries for the works of Petrarch. On this occasion he confined himself to the illustrations of Petrarch's *De remediis utriusque fortunæ*. (*R. Art Chrét.* 1901, p. 61.)

Another Portrait of Petrarch.—The *Gaz. B.-A.* for 1890, published a portrait of Petrarch from a manuscript of his *De viris illustribus*. In the same periodical for 1901, pp. 292-294, Pierre de Nolhac publishes another portrait of Petrarch, which he finds in the initial letter of the frontispiece of a manuscript of Petrarch's *Liber rerum memorandarum* in the Bibliothèque Nationale, Paris. The manuscript came from the poet's own library.

A Notable Collection of Old Masters.—The collection of M. Rodolphe Kann, of Paris, contains many important examples of Dutch, Flemish, and Italian paintings. It has been brought to the attention of lovers of art in a handsome folio, *Die Gemaelde Galerie des Herrn R. Kann in Paris*, with 100 heliogravures, text by W. Bode, published in Vienna in 1900. A general résumé of the contents of the collection is given by Émile Michel in the *Gaz. B.-A.* 1901, pp. 385-400, 493-506.

Bulletin Monumental.—Since the death of the Comte de Marcy, M. Lefèvre Pontalis has become the director of the Société Française d'Archéologie and of its organ the *Bulletin Monumental*.

BELGIUM

BRUSSELS.—**Byzantine Silks.**—The Musée du Cinquantenaire at Brussels has purchased from the church at Münsterbilsen the finely woven

silken stuffs which enveloped the relics of Ste. Landrade. They date from the fourth to the sixth centuries and represent chariot races. They were made at the atelier which then existed in the palace of the emperors of Constantinople. (*R. Art Chrét.* 1900, p. 550.)

MALINES. — **Frescoes.** — The frescoes of St. Alexis, St. Dorothea, and St. John the Baptist, discovered beneath the whitewash on the walls of the transept of the cathedral of Malines, have been described by Canon van Caster in an article entitled 'Découverte archéologique à l'église métropolitaine de Saint Rombant à Malines,' published in the *Ann. de l'Académie d'Archéol. d'Anvers*, 1900.

GERMANY

FRANKFORT. — **A Drawing by Correggio.** — Corrado Ricci, in his detailed volume on Correggio, mentions only four drawings by this master, all being sketches from the frescoes of the cupola of the cathedral at Parma. In the *Gaz. B.-A.* 1901, pp. 318-320, E. Jacobsen publishes another sketch, now in the Stadel Institute at Frankfort. It represents a nude youth holding a candelabrum. It was also a preliminary sketch for the Parma frescoes.

ENGLAND

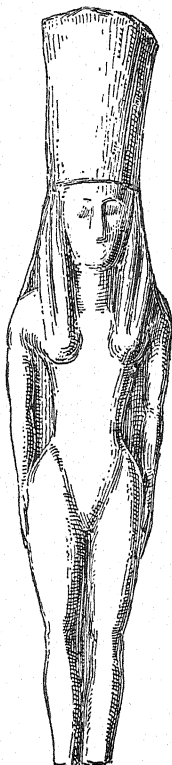
LONDON. — **Goldsmith Work at the Burlington Fine Arts Club.** — The exhibition of goldsmith work at the Burlington Fine Arts Club during the present winter has been exceptionally interesting. The collection contained some superb examples of Gothic workmanship, some masterpieces of the Renaissance, and many examples of work later than the sixteenth century. The objects came from English private collections, but represented Flemish, German, Italian, French, and Spanish, as well as English, workmanship. (*Chron. d. Arts*, 1901, p. 100.)

Discovery of a Painting by Vermeer of Delft. — An important work by Vermeer of Delft has recently been discovered in England. It represents Christ in the house of Mary and Martha. The figures are full size, as is the case with the Dresden Gallery example. The painting is signed with the artist's monogram. It is singularly beautiful in color and intensely dramatic in sentiment. It has been purchased by an English collector. (*Chron. d. Arts*, 1901, p. 156.)

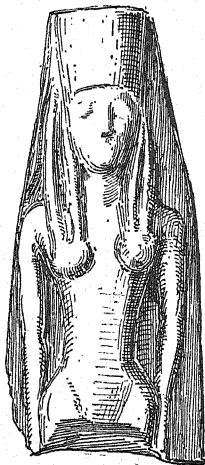
New Art Gallery at Whitechapel. — Near Toynbee Hall, Whitechapel, London, there has recently been erected an art gallery. The exhibition continued through March and April. The catalogue showed 367 paintings, principally modern works, with a number of notable pictures by the old masters. Over 87,000 visitors were admitted during the first seven days. (*Am. Architect*, May 25, 1901.)

UNITED STATES

BOSTON. — **A Painting by Velasquez.** — The trustees of the Boston Museum of Fine Arts have bought a large and important painting by Velasquez, 'The Prince Balthazar Carlos and his Dwarf,' a fine and characteristic example of the great Spanish master. It comes from the private collection of the Earl of Carlisle, at Castle Howard. (*Public Opinion*, February 21, 1901.)



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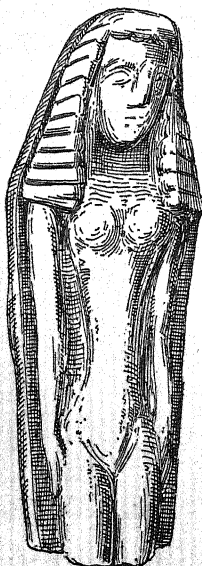
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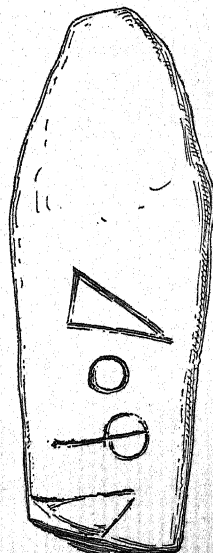
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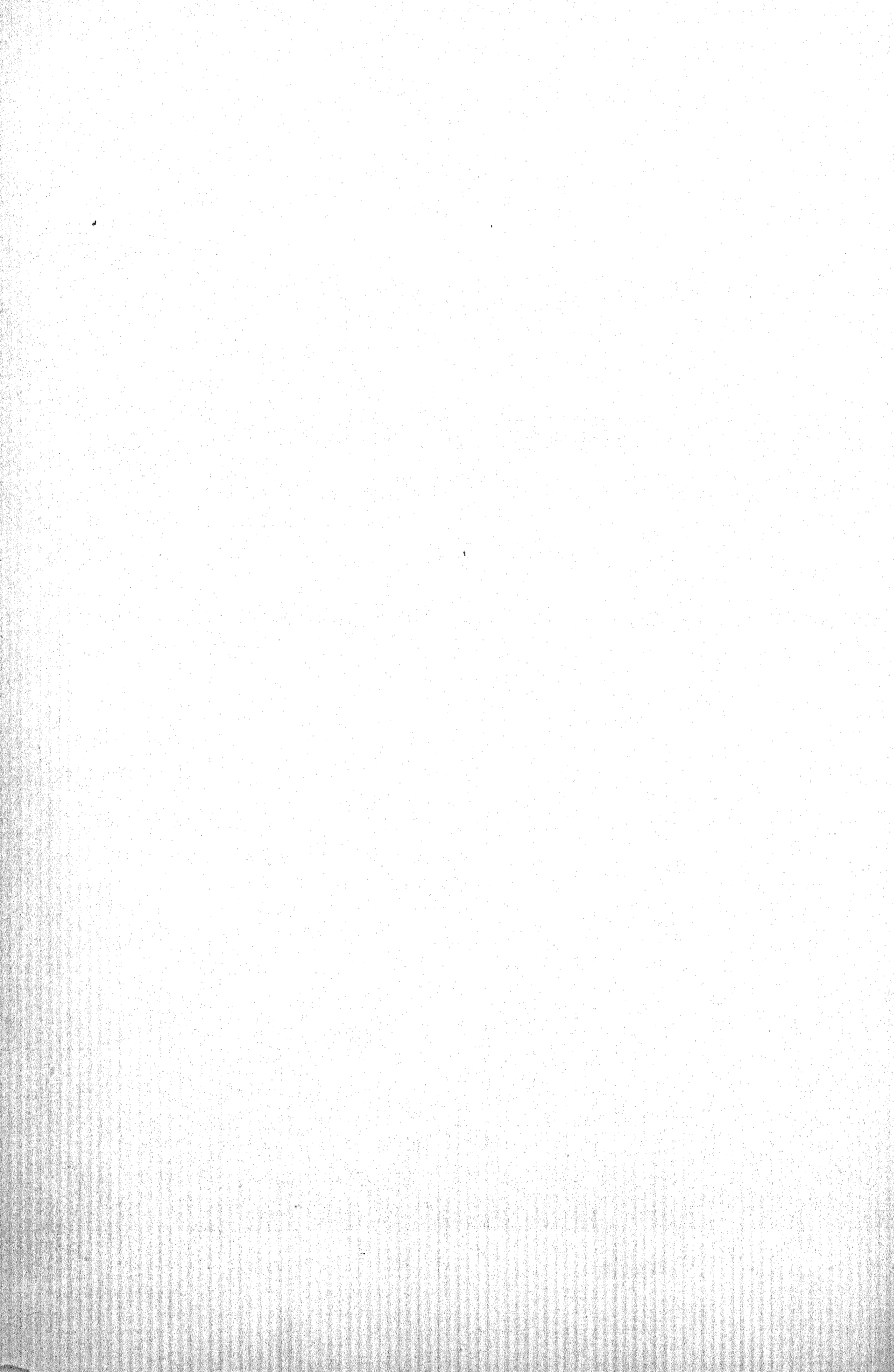
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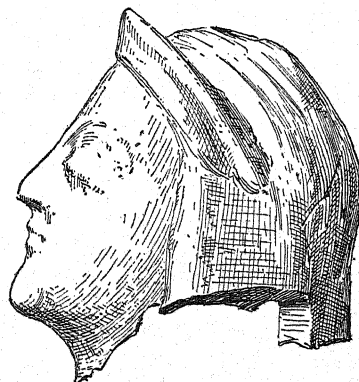
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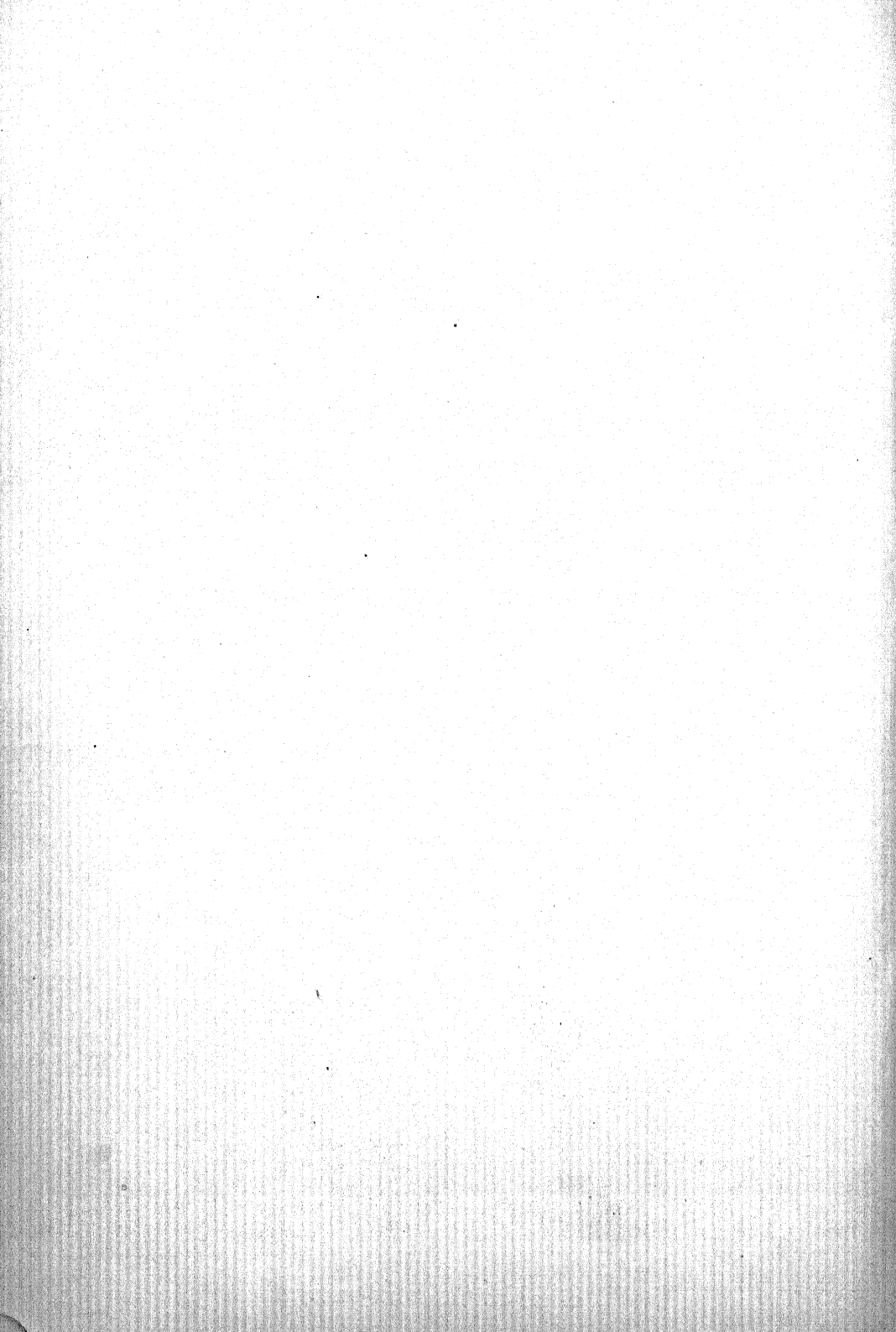
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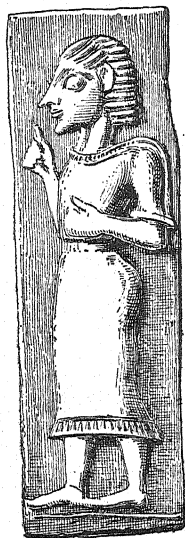


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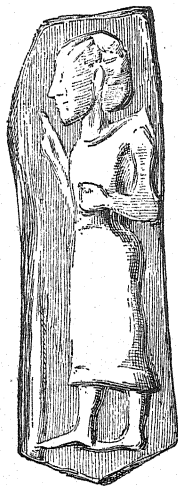


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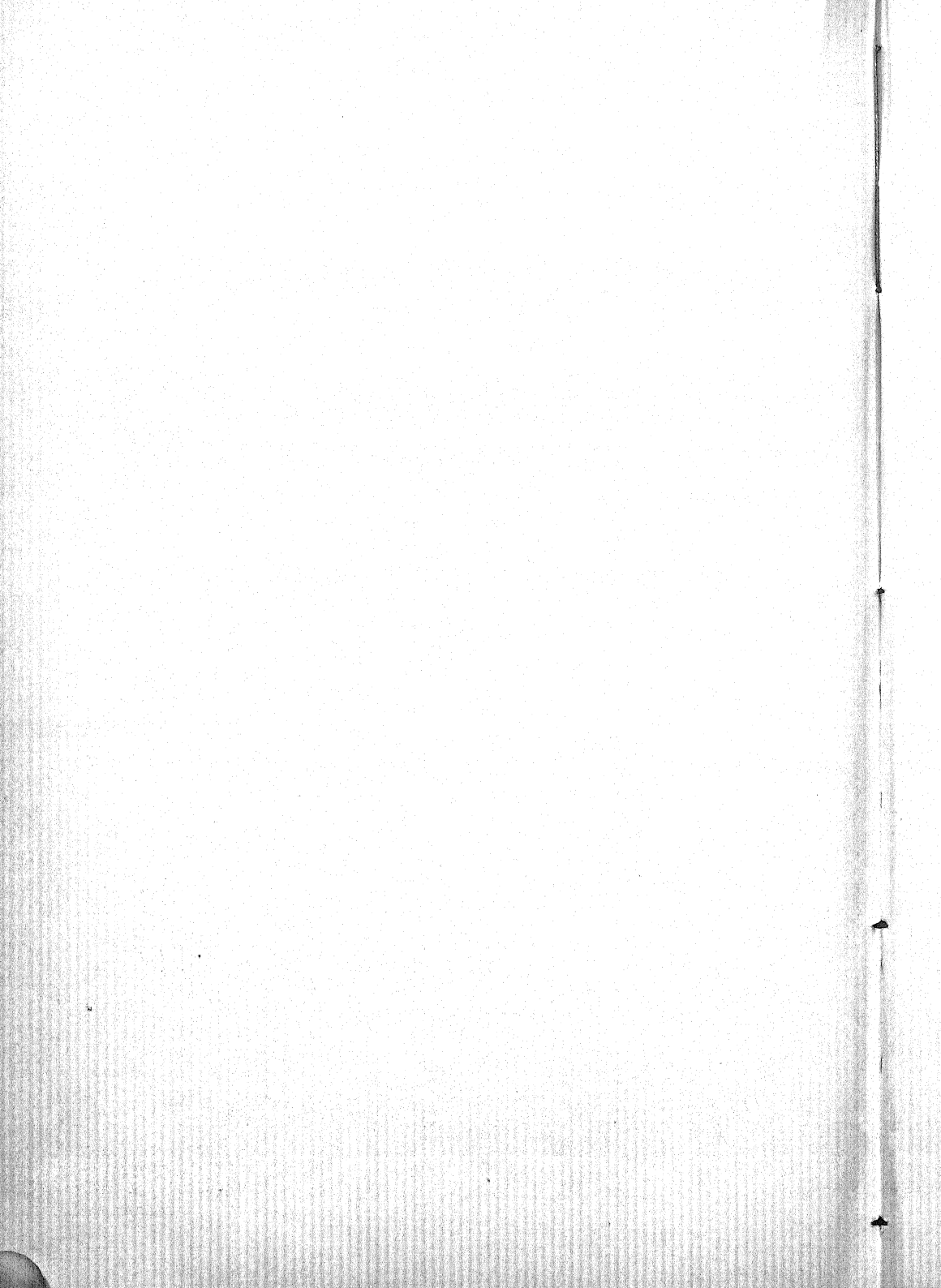
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CRETAN EXPEDITION

XVI

REPORT ON THE RESEARCHES AT PRAESOS

[PLATES X-XII]

ONE of the cities which most attracted my attention during the researches made in Crete for the American Institute was Praesos. The abundant relics of the pre-Hellenic period found throughout the whole of its territory in preceding excursions by me and afterward by Evans and Mariani, and the discovery (in 1884) of the fragment of an Eteocretan inscription,¹ indicated that the most ancient archaeological strata of this city ought to be exceedingly rich in surprises for whoever would undertake their exploration.

The thing that tempted me above all was the desire to discover fresh texts written in the dialect of the fragment mentioned above, and to see whether such discoveries might not assist in finding the key of the idiom, which even in times relatively advanced must have been spoken by the Praesians. I regret to say that this, my first object, was not attained; but for all that my work has not been without its fruits.

Though Eteocretan inscriptions failed me, I was able to make other discoveries which were beyond my expectations. These consist in two groups of votive terra-cottas (PLATES X-XII and Figures inserted in this article), proceeding

¹ *Museo Italiano*, II, p. 673. A photographic *facsimile* of the inscription is given in Evans's *Cretan Pictographs*, p. 85.

from two different deposits and representing a quantity of types for the greater part very archaic, whose importance for the history of earlier Greek art in Crete, and its relations with that of other Hellenic regions and with Oriental art, should not remain unnoticed.

The illustration of these terra-cottas was reserved for the late Professor Merriam, who had already made known the Praesian "finds" in a lecture given by him at the American School of Athens a few days before his death. In the hope that some one else will make them a special study for this *Journal* in his stead, I proceed to give an account of my work in this place.

The city of Praesos (see the bird's-eye plan, Fig. 1) occupied a very considerable space. Its ruins are scattered over the summits and slopes of the hills A, B, and C, which formed its three acropoleis, as well as on the kind of saddle which divides the two first from each other, and on the little plain extending between the first and the third. These consist chiefly in strong terrace walls. Traces of public or private buildings are not visible in great number at the surface, but the great heaps of material and the innumerable fragments of pottery which cover its whole area give this city the appearance of having been amongst the most populous centres of the island. The description which Professor Mariani gave of it in the *Monumenti Antichi*, vol. VI,¹ will permit me to be brief with mine.

The centre of the city during the historic epoch was the space comprised between the first (A) and the second acropolis (B). The hill of the third acropolis, if my observations are correct, was less inhabited in those times. As much as is visible of its ruins points to an earlier epoch; and the fact that from its western side comes the fragment of Eteocretan inscription, and that upon its summit was found, as we shall see, the hearth of a very ancient cult, makes me think that it might be the seat of the prehistoric settlement or of the primitive Eteocretan city. This was abandoned probably in the following period, and

¹ Pp. 283 ff.

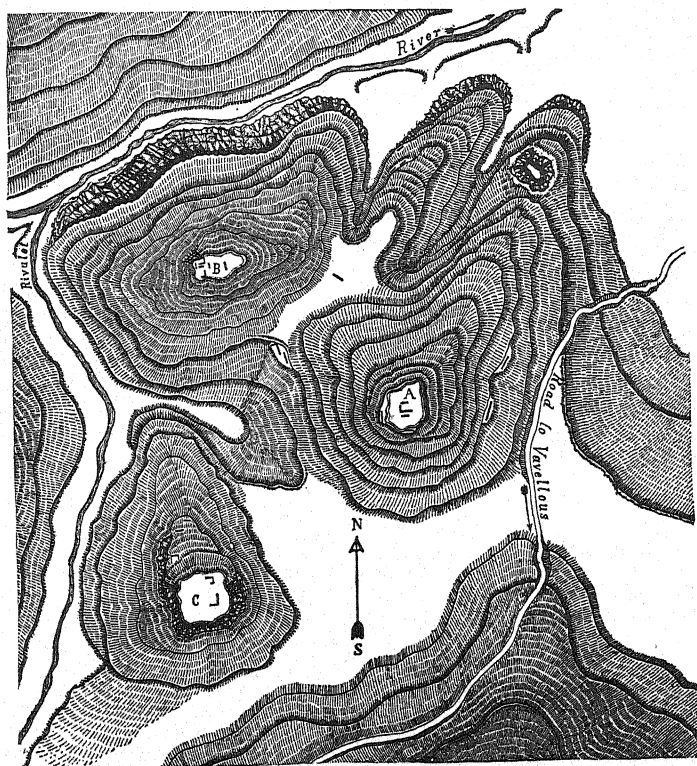


FIGURE 1.—BIRD'S-EYE PLAN OF PRAESOS AND VICINITY.

considered merely as a sacred place, where were continued still for a long time the religious practices of the pre-Hellenic forefathers. But of this hill we shall speak farther on.

Upon the first acropolis (A), which is the highest, we see the remains of what must have been the principal temple of Praesos, a rectangular construction oriented. I believe I found among the broken pieces, which encumber the ground all about, two fragments of the tiles which covered the roof. The one (Fig. 2) is of *poros*; it has a very

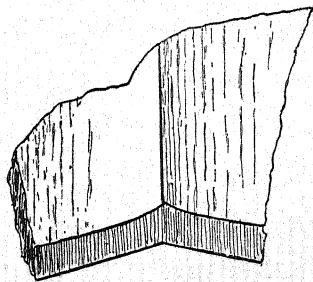


FIGURE 2.—FRAGMENT OF A TILE FROM PRAESOS.

open angle, and the external surface is slightly hollowed out; its thickness is of 0.075 m. It is supposable that this might belong to the epoch when the city was most flourishing. The

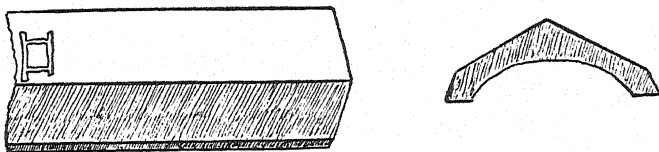


FIGURE 3.—INSCRIBED FRAGMENT OF A TILE FROM PRAESOS.

other (Fig. 3) seems to me of more ancient date, rather than of a period of reconstruction or late restoration; it is of terracotta and bears a mark connecting itself, more than with the Greek alphabet (where it might be an archaic form of η), with the linear series of Evans.

Decidedly Greek, but still ancient enough, if we may judge from the form of the ζ , is another signature, which I found upon a broken brick on the southern declivity of the hill between the two acropoleis, and which perhaps also came from the same place. Shall we read here $Z\eta\nu[\iota \Delta\iota\kappa\tau\alpha\iota\omega]$ and find

an allusion to the divinity to whom we can, with reason, believe was dedicated the chief temple of the city? The thickness of the brick is of 0.024 m.; the height of the letters 0.013–0.014 m.

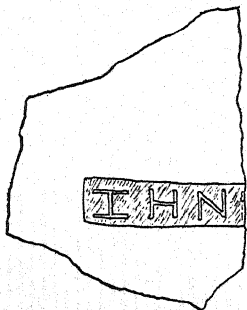


FIGURE 4.—INSCRIBED FRAGMENT OF A BRICK FROM PRAESOS.

In the saddle or little valley which divides this from hill B are to be seen traces of an ancient road paved with large slabs. This road leads to the small plateau which forms the summit of the second acropolis, in

part levelled artificially, the rock here presenting at various points plain signs of having been deeply worked down by the hand of man. Here also stood several buildings, and at its western border are to be seen two cisterns excavated in the

rock. In the modern wall which runs along the edge of the hill opposite the cisterns, an ancient block of local stone examined by me presents on its surface a mason's mark almost the same as that on one of the blocks of the prehistoric building of Cnossus, published by Evans in his *Cretan Pictographs*, p. 13, Fig. 9 b.¹ Our stone, of which I give the facsimile here, is a little broken at the sides; it is 0.27 m. high, and 0.46 m. long. The mark is cut very deeply on the right side of the block, and is 0.18 m. in length.

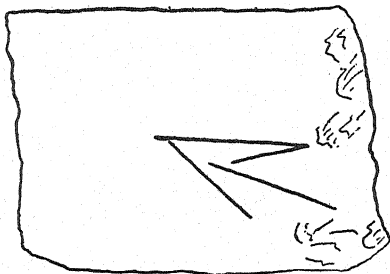


FIGURE 5.—STONE WITH MASON'S MARK FROM PRAESOS.

Below this hill, and upon its western slopes, I believe the necropolis, or one of the necropoleis of the city, to have been situated. At least, we see here in several places cavities hollowed out in the rock, which have every appearance of having served as tombs. Some have even a *loculus* over the entrance cut out in the natural wall, perhaps for the reception of offerings or the like.

In the steep and narrow valley forming, as it were, the continuation of the saddle between the two acropoleis, were the ancient stone quarries. The works in the rock, whence were cut the blocks and slabs for the buildings of the Praesians, are distinctly visible, especially on the flanks of the right hill.

The third acropolis (C) is somewhat more lofty than the second, but lower than the first. The hill is oblong in shape, with the greater axis in the direction from south to north. The highest part is the small crest of rocks rising above its southern flank; toward the north it descends in great natural steps and inclined terraces, which terminate in the deep valley of the rivulet in front of the second acropolis. Toward the east it descends, with an almost precipitous incline, into fields

¹ *Journ. Hellen. Stud.* XIV, ii, p. 282.

scattered over with pottery, which formed probably a quarter at the south end of the city. Figure 6 gives us the summit of this acropolis.

Between the group of rocks and the northern declivity is an esplanade of about 55 m. on the line east to west, and of 31 m.

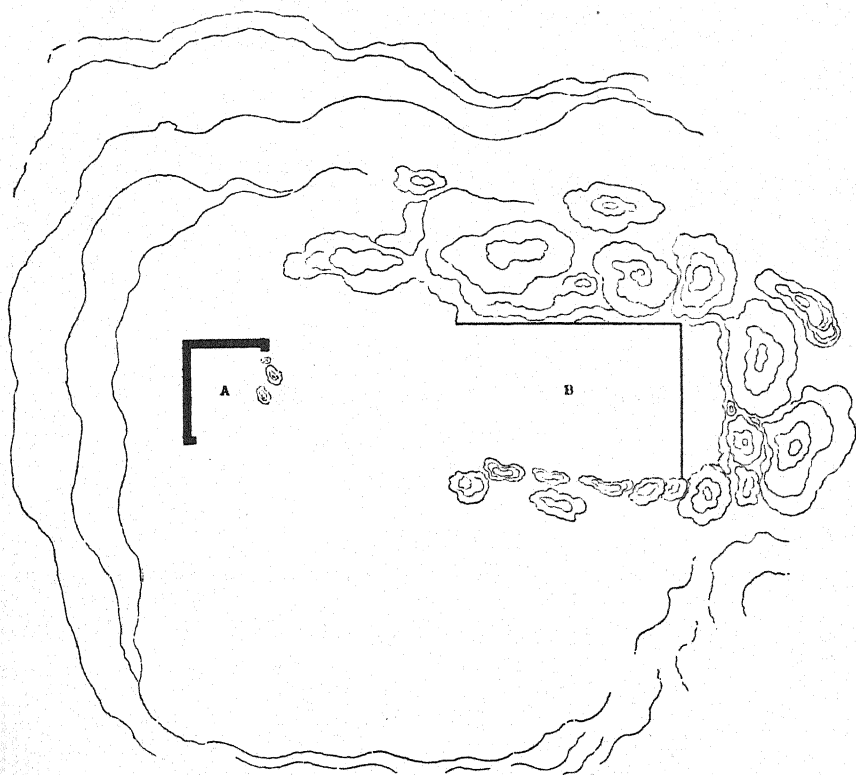


FIGURE 6. — THE SUMMIT OF THE ACROPOLIS C AT PRAESOS.

north to south, obtained in great part by levelling the irregularities of the summit, and clearing it of isolated and mobile masses; in part, also, by working down the cliff deeply in such a way as to form, at the southern extremity, a rectangle, B, having two sides cleanly cut in the rock.

On this small plateau must have risen the principal buildings of this acropolis, to which probably appertained some wrought

masses of stone spread here and there on its surface. On the northern, more gradual descent are to be seen remains of other primitive constructions in huge blocks.

Below the west and southwest borders of the esplanade are the fields of Regep-Agà-Perdikaki and other Turks of the village of Vavelloi, formed of long and narrow terraces artificially supported by dry walls, almost entirely built with ancient stones. Amongst the fragments spread over the area of this field I had remarked, even at my first excursion to Praesos, in 1884, pieces of columns and great squared blocks of *poros*; and it is within one of these terrace walls that I then saw and copied the fragment of Eteocretan inscription mentioned above, which is now in the Museum of Candia.

Considering the precipitous steepness of the sides of the hill in this direction, it appears evident that, if not the whole, at least very much of the ancient material dispersed over these fields must have fallen down from the overhanging plateau. There probably must also have been the edifice from which the inscription came; and considering the custom of the Cretans of writing, especially in the most ancient times, their acts upon the walls of the public buildings, the idea had flashed across me that there might possibly be found a *muris inscriptus* covered with texts in the mysterious language of that fragment.

My plan of making a series of explorations upon this acropolis was speedily decided, and with sixteen men from the village of Vavelloi I set to work immediately.

First I opened a long trench close to the edge of the plateau above the field of Regep-Agà, but here, at about half a metre below the actual level of the soil, was found everywhere the living rock. Another trench in the same direction, dug more to the north, but a little more toward the interior of the esplanade, gave the same negative result. With a third trench in perpendicular direction to the line previously opened I proceeded farther on toward the centre of the plateau, digging experimental holes here and there about the trench, but with no bet-

ter success. Then I pressed on northwest in the direction of the opposite border of the esplanade, where the earth seemed more abundant, and one might suppose the ancient level covered with a deeper stratum of material.

Here at last the pick met with ancient remains, and as we shall see presently, such as are not without importance for the typography of the primitive settlement of this hill, and for the history of ancient Cretan art. But the Eteocretan inscriptions and the expected edifice were not to be found. This does not, however, yet blight my hopes, but postpones them to a still vaster campaign of excavations which ought to be made in this place by some one, now that the times are propitious for great archaeological explorations in Crete, explorations that are destined to throw abundant light on questions both of history and of art.

I had excavated scarcely 20 cm. down when two lines of stones began to show themselves, which met at an angle (A in our Fig. 6). Deepening the excavation, we perceived that these were two low walls, or rather two parapets, composed of a single course of blocks standing on a very simple foundation of compact earth and small stones. That there might be two other walls forming with these a closed rectangle, as we should be led to conjecture from the two small projections visible at the extremities, is possible, but not certain, inasmuch as there are some large masses of rock upon the line where one of these walls would have run. The eastern wall is 4.95 m. long, the northern 5.95 m. The ground within these two lines of stones, especially near the margins, showed black patches proceeding from burnt or carbonized matter. Soon the spade began to turn up bones of burned animals, horns of oxen and rams, a real heap of leavings from ancient sacrifices, and mixed up with these countless fragments of vases and terra-cottas, as well as bronzes, which represented what had once been a sacred deposit of votive offerings perhaps pillaged and carried off even in remote antiquity.

This deposit in its contents and characteristics,—if we dis-

regard its smallness, poverty, and bad state of preservation — may be compared with the deposit in the cave of Zeus on Mount Ida, with this difference, that while in the latter bronzes predominate, in that of Praesos predominate terra-cottas.

Both were places of worship, of a worship of ancient origin, practised without a temple in the midst of the wildness of nature. On Mount Ida we have a large cave with an imposing altar shaped out of an enormous block of natural rock, which stands before its entrance. Here, instead, we have only the altar in the open air, built probably of earth, and surrounded by four low walls or simply supported on two parapets at the two sides which look toward the declivities of the hill. Upon this altar of such primitive construction were slain and burned the victims; upon the same or around it were placed votive offerings, precisely as on the projections and in the hollows of the rock of the Idaean altar; then votive gifts and remains of sacrifices, accumulating in the course of time, were partly covered under the débris and earth brought down from the altar itself, or were actually buried in a trench at its foot. We could imagine its structure as not very dissimilar to that of the famous altar of Zeus formed of the ashes of the victims in the Altis of Olympia,¹ the foundation of which was also attributed by legend to a Cretan, the Idaean Heracles. But the original form of the worship, with its apparent simplicity, would ally itself perhaps more to that which we can imagine in the sacrifices and ceremonies performed by the Basilae on the summit of the Cronion hill, which overlooks the Altis.²

In front of this altar the rocks, as we have seen, are levelled and cut in such a way as to form a rectangular area (B), 13 m. long and 9 m. wide (with a sort of step and bench running round two of the sides), where the sacred assemblies met, or the ritual χορός was danced, so dear to the ancient Cretans; unless, to be sure, we should prefer to see in this little space the *agora* of the early settlement. Certainly this union of a hypaethral shrine and of a sacred precinct does not find hitherto a fitter

¹ Paus. V, 13, 8.

² Paus. VI, 20, 1.

But the Cretan prototype of the cylindrical terra-cottas of Praesos exists in the example from the Ashmolean Museum of

Oxford, which I reproduce here from a photograph (Fig. 9) kindly communicated to me by my friend, Mr. Arthur J. Evans, together with a head (Fig. 10) belonging to another piece of the same collection. Both come from western Crete, that is, from the opposite extremity to that where lies the city of Praesos. To the same class belong some very rudimental heads found in the sanctuary of Hermes Cranaeus (*Mus. Ital.* vol. II, pl. xiv, 1 a



FIGURE 9.—CYLINDRICAL TERRA-COTTA FROM WESTERN CRETE: NOW IN OXFORD.



FIGURE 10.—TERRA-COTTA HEAD FROM WESTERN CRETE: NOW IN OXFORD.

and *b*)—a fact proving that these *xoanon*-like terra-cotta figures were quite common in the early plastic art of the island.

Of the many other pieces of statuettes in various styles and types I cannot even speak, because they are in too fragmentary a condition.

To the figures of animals, real or fantastic, belongs a large paw, which may be that of a lion or a sphinx. Amongst the vases I note one in the shape of a little *kalathos* (Fig. 11) with geometrical ornament. It is 0.14 m. high, the diameter at the mouth being 0.15 m. Another example of equal form and proportions is, in place of ornament, painted black in the upper and lower part with an intermediary zone without color.

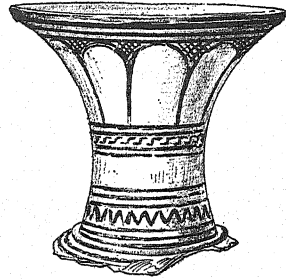


FIGURE 11. — VASE FROM PRAESOS.

A vase in form of a *phiale* with two horizontal handles has a decoration of stripes and lines of dots. Some fragments of *pithoi* present ornaments of large *bullae* in relief, or concentric circles disposed in zones.

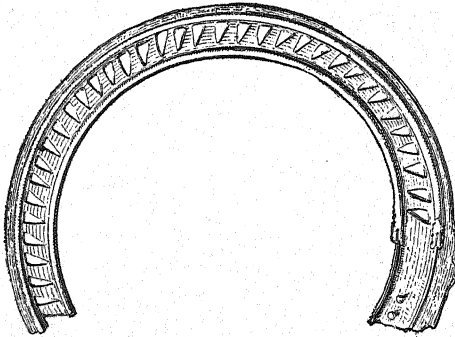


FIGURE 12. — RING OF A TRIPOD FROM PRAESOS.

The little bronzes resemble entirely those of Mount Ida. The principal ones are :

A little ram like the numerous votive animals of Olympia, etc.

A ring or handle of a tripod, of which I give a drawing here

(Fig. 12). It has a diameter of 0.24 m.

Different little cuirasses of the thinnest bronze leaves (about one-half a millimetre in thickness), with raised work, as here drawn (Fig. 13). This one is 0.10 m. high, with a breadth at

exhibit the rigid Egyptizing style, and, besides those in Cyprus, there are examples in the figurines of Camiros (British Museum), not only of terra-cotta, but also of other material; in terra-cottas of Ephesus, Sardinia, etc.¹ The ivory figurines of Dipylon belong to this class. The type, as well with the *polos* as without it, seems much diffused in all the archaic Cretan deposits. Numbers 4, *a* and *b* (front and back), of our PLATE X, offer us an example without *polos* and with hair dressed in the Egyptian fashion, which may be compared with that of the archaic statue from Eleutherna.² This latter comes from Praesos, but was not found by me. The inscription Δόϛ[σων (Δόξων), seen on side *b*, is interesting, inasmuch as it con-

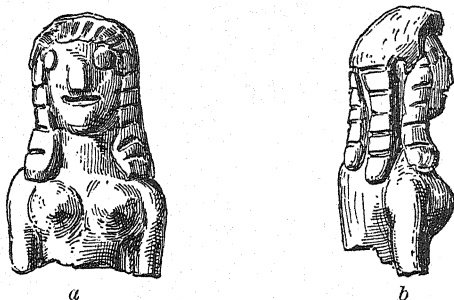


FIGURE 14.—TERRA-COTTA IN CANDIA.

tributes, within certain limits, to decide the epoch of these Praesian idols, which must be about the seventh century B.C. The alphabet here used is that represented in the inscriptions of the Gortynian Pythion. A fragment like those with the *polos* on the head is published in Mariani's *Cretan Antiquities*;³ another without *polos* also published by Mariani,⁴ and reproduced here from a more accurate design of M. Gillieron (Fig. 14), is to be found in the collection of the Syllogos. This last is executed with a technique much ruder and more primitive, reminding us again of the infantine products of Ilios.

¹ Cf. Roscher, *Lexikon*, I, 407, 54 ff. (*Aegyptisierender Typus*).

² Loewy, *Rendiconti d. R. Acad. dei Lincei*, 1891, p. 599, and Joubin, *Rev. Arch.* 1893, p. 10, pls. iii-iv.

³ *Monumenti Antichi*, vi, p. 188, fig. 25, 2.

⁴ *Ibid.* p. 185, fig. 22.

Number 5 of PLATE X is a fragment of an idol connected with the Babylonish type of the robed Astarte, who is touching or pressing her breasts. The Oriental idol of the goddess of fecundity, Astarte, is found in the archaic Cretan terra-cottas, as in Cyprus, also in the same pose from which, according to some, the Cnidian Venus has been derived.¹ It is represented by the figure in the Museum of the Syllogos from an uncertain locality, which, to complete our series, I have reproduced in No. 6 of PLATE X. Two similar fragments are also given by Mariani.²

To an idol of the same kind as the preceding, belongs perhaps the following rather larger head (Fig. 15). It, however, is too much injured to give any certain idea of its characteristics.

In PLATE XI are collected the principal types of heads which belong to figures of large proportions. Numbers 1 *a*, 1 *b* (face and profile), and 2 wear the *polos*. The first is 0.135 m. high and belongs to a female figure, the *polos* is ornamented with spiral lines; the ears project widely and are added on by the potter after modelling the head. The profile is remarkable from the turned-up nose, which hints more at a portrait than a type created by art. The second is 0.11 m. in height, and represents a head with a very pointed chin, but it is too obliterated at the surface to show other details.

Numbers 3 *a* and 3 *b* present the face and the profile of a head 0.10 m. high, in which is already seen the fine sentiment of mature Greek archaism. It seems to represent a divinity with a veil and *stephane*. It is somewhat corroded on the surface, and it is due perhaps to that circumstance if the eyes appear closed or half-closed.

Striking, also, is the Greek archaic type in No. 4, found by



FIGURE 15. — TERRA-COTTA HEAD FROM PRAESOS.

¹ Curtius, *Arch. Zeitung*, 1869, p. 63.

² *Ibid.* p. 188, fig. 25, 4-5.

Number 3 is a somewhat grotesque figure of a warrior armed with a lance and round shield. The shield has an *omphalos* in the form of a ram's head,¹ which the unskilful artist has not known how to give in a front view. The helmet with the massive crest is almost like a mediaeval knight's visor. This figure betrays a very inexpert hand.

Of able work and splendid effect is, on the other hand, the very beautiful tablet, No. 4, which represents a warrior with a large helmet on his head, lance and Argive shield in his left hand, who returns victorious from the battle, with his right hand dragging after him a girl won from the enemy.



FIGURE 19. — TERRA-COTTA
RELIEF FROM PRAESOS.

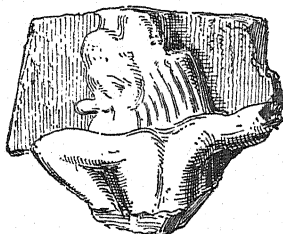


FIGURE 20. — TERRA-COTTA
RELIEF FROM PRAESOS.

Number 5 is a very elegant figure of the known type of the so-called *kalathiskos*, or Laconian dancing-girl.²

Among the fragmentary *pinakes*, the two of most ancient character are those with a warrior holding a round shield, and in the right hand a sword, and that with the figure of a Silenus in brisk action, turned round backwards, with the right arm raised. With his bestial aspect, his pointed nose, his thick and shaggy hair, he is akin to the Silenus of a sarcophagus of Clazomenae.³ Both the fragments are reproduced here in Figs. 19 and 20.

To these is to be added Fig. 21, which represents a woman

¹ Cf. the *omphaloi* in relief on the bronze shields of the Idaean Cave.

² See Furtwängler, *Meisterwerke*, p. 202, note 3, etc.

³ *Journ. Hellen. Stud.* IV, 1883, p. 21, fig. 15; cf. *ibid.* VI, 1885, p. 180 ff.

standing, with a long robe, and two long tresses falling on her breast, if they are not rather a ribbon or cord to hold up the tympanum she carries in front of her body. The ornament of *bullae* surrounding the periphery of this disk makes it look like the shields of the Idaean Cave; but perhaps it is too small to be a shield. The meaning of the object, as well as that of the whole figure, is in every way very obscure.

The following (Fig. 22) is a decorative motive of palm leaves and lotus flowers, with below the taenia interwoven, so common in archaic Greek art. The tablet is complete, with merely a chip off the lower left angle, and it has two small holes for hanging up.

Figure 23 is the fragment of a tablet with the hind portion of a sphinx or a griffin, recalling in treatment the works in *σφυρήλατον*. The details of the thigh are indicated by curvilinear furrows. The style is



FIGURE 21. — TERRA-COTTA FROM PRAESOS.

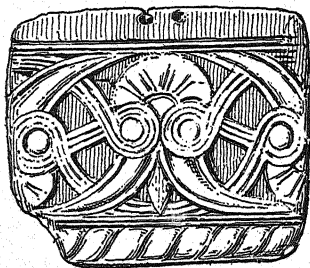


FIGURE 22. — TERRA-COTTA ORNAMENT FROM PRAESOS.



FIGURE 23. — TERRA-COTTA FRAGMENT FROM PRAESOS: SPHINX OR GRIFFIN.

dry and precise. According to the archaic manner, only one of the legs is given, the other being supposed hidden by that presenting itself in the foreground.

because the greater portion of those collected by me come from that territory, which, possessing rich strata of this mineral, was destined by nature to become one of the principal centres of this industry in Crete.

Here is given meantime a brief topographical description of its ruins.

As is seen in the subjoined sketch (Fig. 1), the hilltop of Haghios Ilias, at a short distance from which is found the

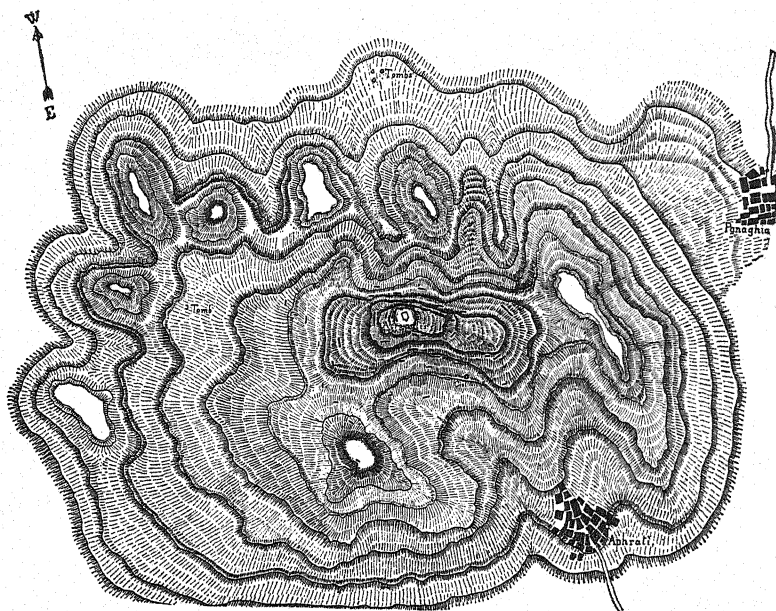


FIGURE 1.—GENERAL PLAN OF HAGHIOS ILIAS.

modern village of Aphrati, constituted the acropolis of the city. The remains visible above ground consist also here chiefly in strong terrace walls, — the usual and necessary characteristic of all the cities built in mountain regions, — and in a very thick stratum of potsherds broadcast over its whole area, together with splinters and chips of steatite and some bronze fragments. Amongst the remains of painted vases abound those of the Geometrical period, of which I give two examples (Figs. 2 and 3). Amongst the unpainted objects we find several very

remarkable pieces of archaic *pithoi*, with figures in relief, which the reader will find reproduced and illustrated some pages farther on in an article contributed to the *Journal* by my friend, Dr. Savignoni (pp. 404 ff.).

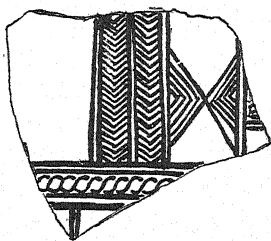


FIGURE 2. — GEOMETRIC FRAGMENT
FROM HAGHIOS ILIAS.

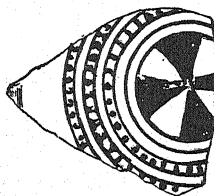


FIGURE 3. — GEOMETRIC FRAGMENT
FROM HAGHIOS ILIAS.

A portion of a plinth in terra-cotta, like a common brick (Fig. 4), bears some signs which might be ascribed to the linear series of Evans, and which in reality are very like those seen on an amethyst of Cnossus,¹ and on the subjoined island stone found by me at Praesos (Fig. 5), but which, along with those of many steatites of this place, it is not unlikely may belong to an epoch much more recent.

Very ancient, and perhaps not far from the Mycenaean period, I believe, may be the following bronze figurine, about 10 cm.



FIGURE 4. — INSCRIBED BRICK
FROM HAGHIOS ILIAS.



FIGURE 5. — ISLAND STONE
FROM PRAESOS.

high, which was found by a peasant of the place, and has been reproduced from my photograph by M. Gillièron (Fig. 6).

The chief temple of this place must have risen on the summit of the acropolis hill, where now stands the little country

¹ *Cretan Pictographs*, p. 12 [281], fig. 8.

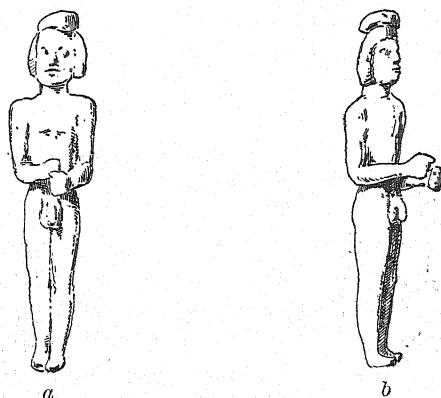


FIGURE 6. — BRONZE FIGURINE FROM HAGHIOS ILIAS.

church dedicated to the Prophet Elias (Fig. 7). Around it we still see traces of buildings and some bits of columns of *poros* stone. A large slab of sandstone (*amudaropetra*) near the church (Fig. 8) bears two marks rudely carved which seem to be an archaic *sigma* and a dividing line. The height of the slab is 0.71 m., its breadth 0.52 m., with a thickness of 0.12 m. The

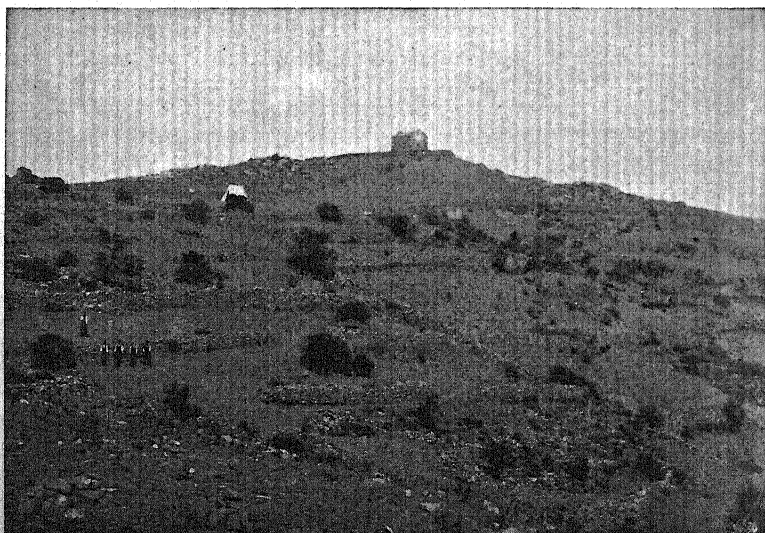


FIGURE 7. — HAGHIOS ILIAS: ACROPOLIS.

height of the marks is more than half a metre; hence larger than the letters in the great inscriptions of the Gortynian Pythion. I suspect that this stone may belong to a very ancient inscribed wall where it could have made part of the *orthostates*.

To what divinity may have been dedicated the temple of this city it seems to me permitted to conjecture from an archaic inscription (Fig. 9), preserved in the village church of Aphrati, which is a dedication—probably of a trophy of arms—to Athena. The inscription, of which I

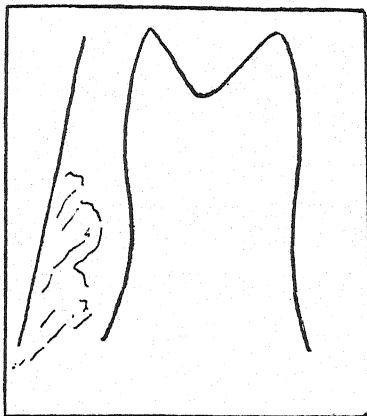


FIGURE 8. — INSCRIBED STONE FROM HAGHIOS ILIAS.

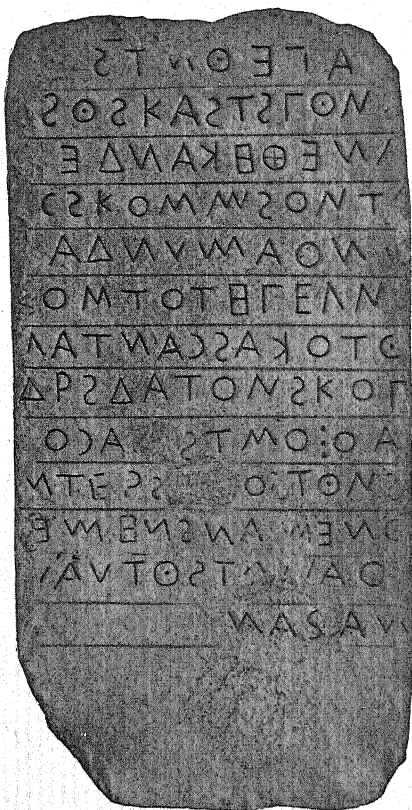
here give a facsimile, is not without difficulties, but I do not think a different reading from mine can be proposed in lines 10–11.

Ὅστις ἀπο|στερί[σκ]οι or ἀποστερί[δδ]οι τὸν ἰδόν, alludes evidently to the dedication of a trophy of arms, or more especially of a bunch of arrows such as we frequently see consecrated in a temple as booty of war, from which some sacrilegious hand would like to steal one. In doing this the culprit would draw down upon himself the anger of Athena. We might expect a κα before ἀποστερίσκοι, but there is no room for it on the stone.

The ο of this inscription is sometimes plain, and again has a dot in the middle. In most cases when it has the dot it corresponds to an ω. But not all the ω's are dotted. To see here an attempt to distinguish the short ο from the long ο as in other archaic alphabets, is a rashness not sufficiently justified. Perhaps, as we may see in some archaic inscriptions of the neighboring city of Lyttos,¹ where the ο has either the concentric circlet, or the circle and central dot, even here this letter

¹ *Mon. Ant.* III, pp. 431–434.

had the centre dotted as much when it was short as when it was long, and if in our fragment the fact does not seem constant, that may depend upon the surface of the stone being much worn away, which would cause this characteristic mark to disappear in many places.



.

. πα-

ρ]ὰ? Λεοντι . .

ίοι καὶ Τίλον [ι,

ἀνέθηκαν δὲ [ἐ-

πὶ κοσμιόντ-

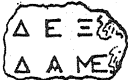
5. ον Θαμννδά[ρ-
ι]ος τῷ Τηλεγν-
ότο καὶ Παντα[ν-
δρίδα τῷ Νικολ-
άο. ὅστι[ς] ἀπο-

10. στερί[δδ]οι τὸν ἰ-
ὸν ἔμανιν ἡμε-
ν] αὐτῷ τ[ὰν] ᾿Αθ[α-
ναίαν.

FIGURE 9.—ARCHAIC INSCRIPTION FROM HAGIOS ILIAS.

The lines of the inscription are divided one from the other by finer horizontal tracings which are intended by the stone-cutter either to guide the letters or for ornament.

The height of the stele is 0.43 m., its breadth 0.21 m., its thickness 0.065 m. The letters are from 0.014 m. to 0.017 m. in height.

In the same village, on the threshold of the house of the peasant, John Garofalaki, is walled in the following fragment of Hellenistic or Roman  epoch. It is of local stone and is 0.050 m. in length by 0.26 m. in width, with letters of 0.05–0.08 m.

II. PRINIÀ

The other ancient city which Mr. John Alden and I were able to examine in consequence of information obtained from some peasants of Messarà is situated upon the imposing height called Πατέλα of Prinià, which from the southern and highest extremity of the province of Malevisi dominates the broad valley

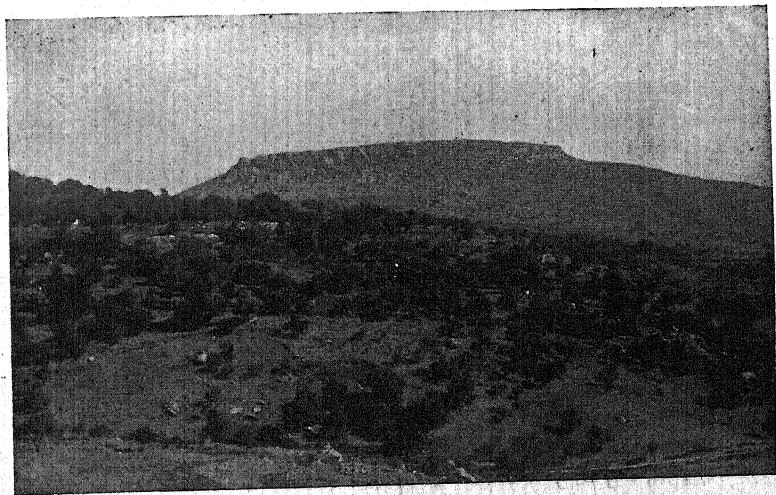


FIGURE 10.—THE SITE OF PRINIÀ.

that descends toward the coast in front of the city of Candia. This hill (Fig. 10), levelled on the summit by nature and defended all round, must have attracted in a particular way the ancient population of the country to plant upon it their fortress and then a city. And in fact the whole surface is full of ancient remains which consist of walls of houses and enormous heaps of stones proceeding from constructions that the peasants have demolished in order to prepare the ground for culti-

vation. A mighty construction of huge blocks, joined without cement, is still standing at about the height of a metre above the level of the soil on the southern brow of the hill looking toward the village of Prinià. Perhaps we have here a part of the fortifications or the palace of the *ἄναξ*.

From what construction come the two following fragments of *plinthoi* (Fig. 11), of soft lime-stone, seen by us in the village, is not known. Their rich decoration points to a public edifice, their geometric character to a very ancient epoch.¹ To this epoch correspond besides the numerous fragments of large jars or *pithoi* which we collected on the hill at various points, and in the village, and which Dr. Savignani will

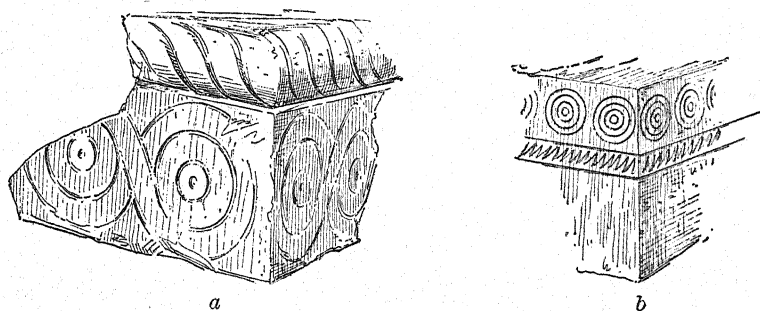


FIGURE 11.—PLINTHS FROM PRINIÀ.

illustrate in the article following, together with the pieces from Hagios Ilias. Perhaps more ancient is the beautiful painted vase published by Orsi in this *Journal*, 1897, Vol. I, p. 252.

To the west of the acropolis beyond a narrow valley are to be seen, cut in the side of the rock, two sepulchral chambers (Fig. 12) of the Hellenistic epoch. In this part must have been the necropoleis of the city, or one of them.

The inscriptions of the *Πατέλα* which Mr. Alden and I succeeded, not without difficulty, in seeing and copying in the village are all archaic, but very fragmentary and meaningless. This is much to be regretted because one of them especially, the largest, raises problems which it is tantalizing not to be able to solve.

¹ The first can be also Mycenaean in decoration.

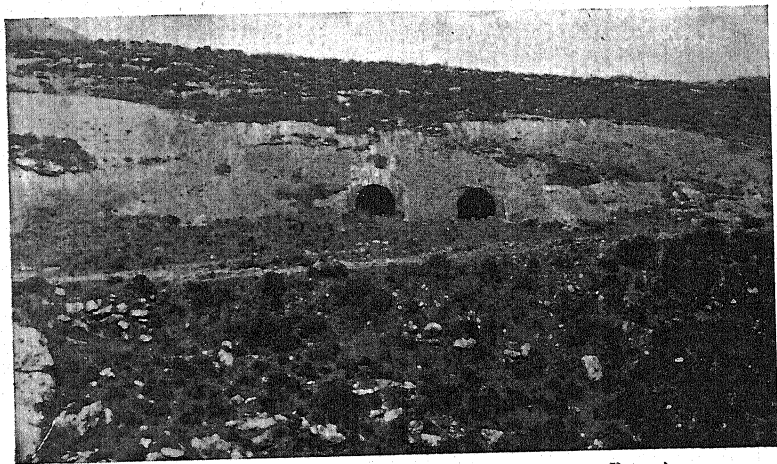


FIGURE 12.—HELLENISTIC GRAVE-CHAMBERS AT PRINIÄ.

This is a mural block 0.245 m. high, 0.52 long, with a thickness of 0.40 m., covered with a very irregular writing, running in the most ancient manner from right to left, but only in small part legible (Fig. 13). The letters vary in height from 0.01 m. to 0.04 m. The stone is in the house of Costis Papadakis.

In the fourth line we find the word *επορος* which is apparently repeated at line 3 . . *opos* and at the fifth . . *opos*. The surmise that we should read *επορος* or *επόρος*, that is to say,

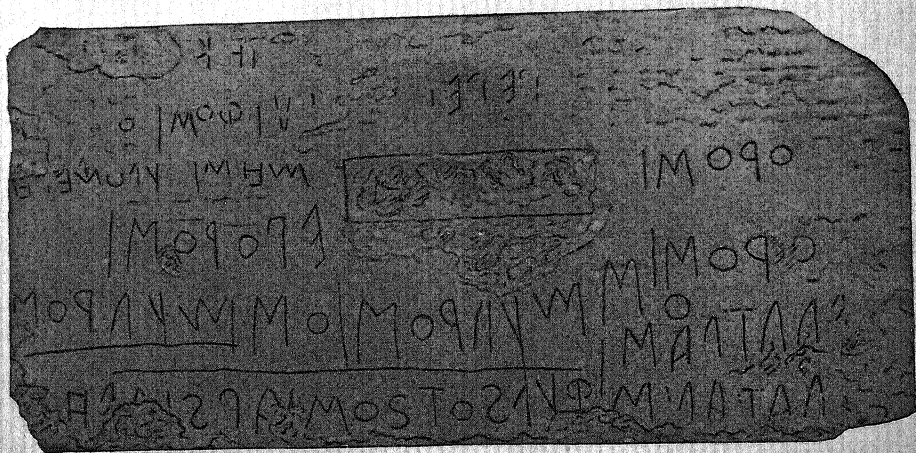


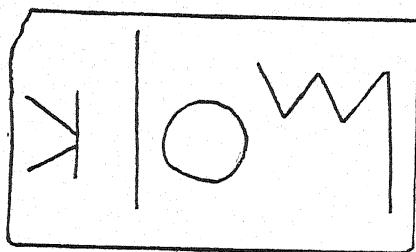
FIGURE 13.—ARCHAIC INSCRIPTION FROM PRINIÄ.

ἔφορος or ἐφόρος, presents itself at once in a Doric country and an island which has had relations with Sparta; but it cannot go beyond a mere surmise, nothing else in the inscription throwing light upon the fact; whilst the epigraphic testimonies give us *cosmoi* as the constant name for the superior Cretan magistrates, even at the archaic period.¹

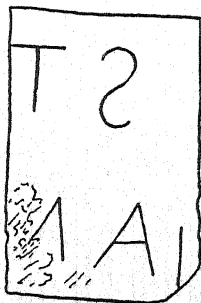
I can make nothing more of this text, where I see no other legible or at least intelligible word save the proper name — a strange one — Ὅσμυγρος — repeated twice in the fifth line.

The other inscriptions are only on fractions of other blocks containing at the most four or five letters of large dimensions, 0.10–0.20 m.

One is in the house of Michalis Katandonakis, and was copied by Mr. Alden. The block is 0.30 m. wide and 0.55 m. long. The letters are from 0.11–0.20 m. high.

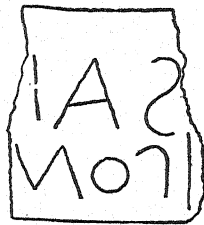
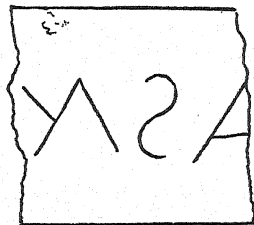


Another in the house of Georgios Jacomakis, height 0.38 m., width 0.27 m., letters 0.09–0.10 m. Copied by Mr. Alden.



¹ Of some late exceptions, in which the *damiorgoi* appear, I shall speak elsewhere.

Two others are in the house of the Turk Hassán Velakis. One is about 0.30 m. high, with letters *anf*. The other has the remains of two lines.



Something we can deduce from these fragments for the history of the archaic Cretan alphabet, and it is that the alphabet of the city which occupied the hill of Prinià belongs to what we may henceforth call the group of Ida that is represented by the ancient inscriptions of Axos and Eleutherna, where the distinctive characteristic is a form of digamma that resembles N.

FEDERICO HALBHERR.

ROME, 1899.

CRETAN EXPEDITION

XVIII

FRAGMENTS OF CRETAN PITHOI

[PLATES XIII, XIV]

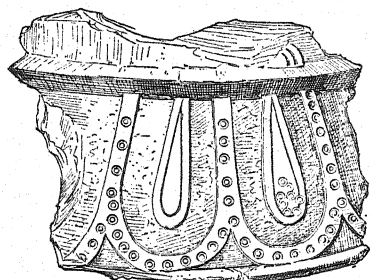
THE fragments of *pithoi* here published for the first time are amongst the most remarkable objects recovered in two or three localities during the explorations made by Professor Halbherr on behalf of the Archaeological Institute of America. Of Cretan *pithoi* nothing was hitherto known beyond the primitive group, howsoever important, of vases found by Calokerinós in Knossos, and a few specimens of a less ancient epoch published by Fabricius and by Mariani.¹ Now the new fragments come to give us a less incomplete idea, not only of the wide diffusion of similar products of ceramic art in Crete, as in Rhodes, Boeotia, and elsewhere, but also of the different phases in the development of the same, thus furnishing a fresh and noteworthy contribution to the history of Greek pottery modelled in relief, for which interest is daily increasing in proportion to the objects successively discovered.

I

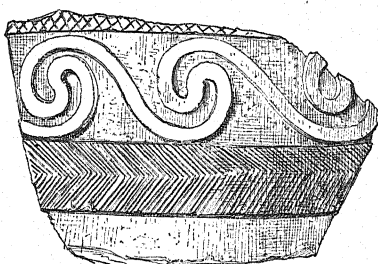
The fragment (PLATE XIII, No. 1) found at Prinià seems to belong to a *pithos* not very dissimilar to the very ancient jars of Knossos,² but with a decorative system somewhat more

¹ *Ath. Mitth.* 1886, pp. 144 ff., pl. iv; *Mon. Antichi*, VI, p. 196, pl. xii.

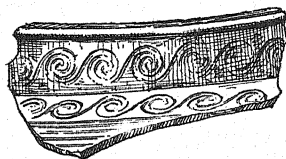
² *Ath. Mitth.* 1886, pp. 144 ff. pl. iv; Perrot-Chipiez, *Hist. de l'Art Ant.* VI, p. 461, fig. 173.



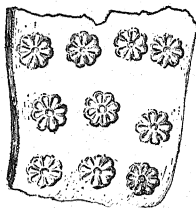
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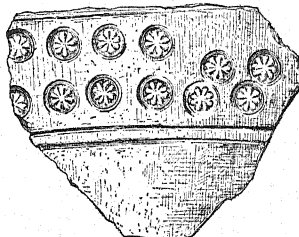
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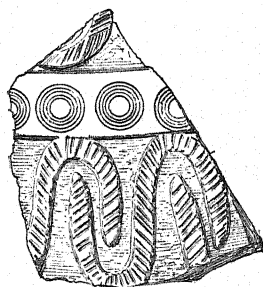
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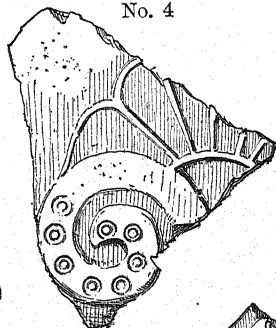
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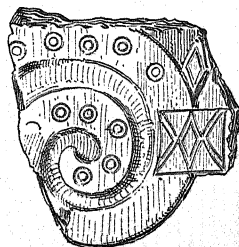
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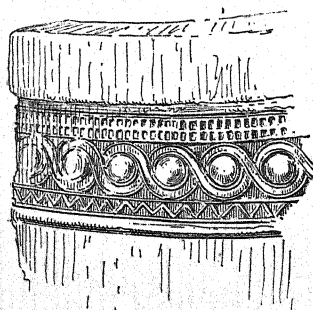
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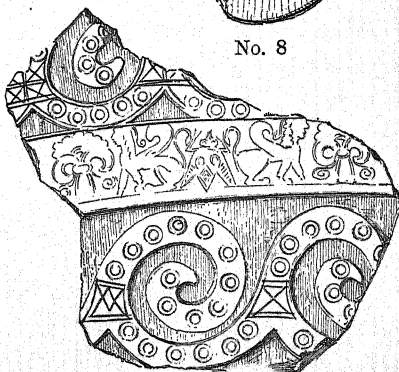
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No. 8



No. 9



No. 10



No. 11

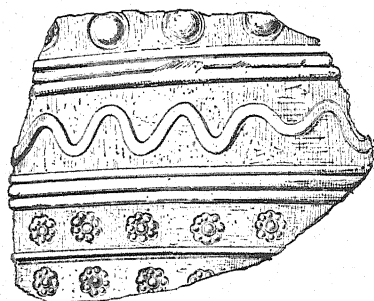
FRAGMENTS OF PITHOI FROM PRINIÀ



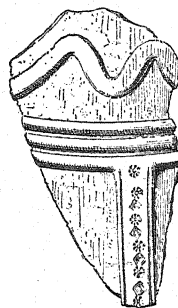
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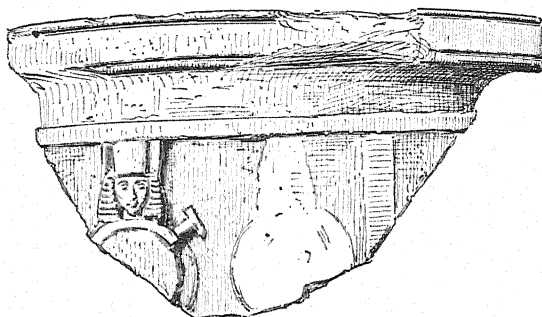
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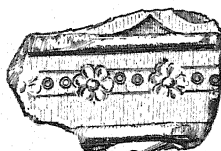
No. 9



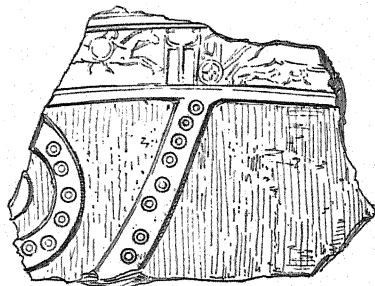
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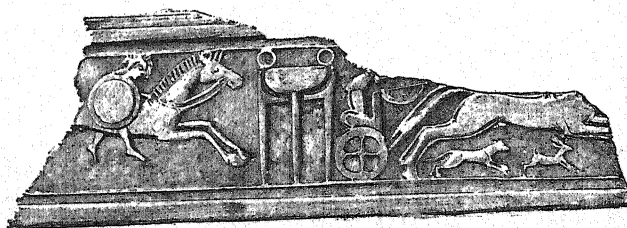
No. 6



No. 10



No. 12

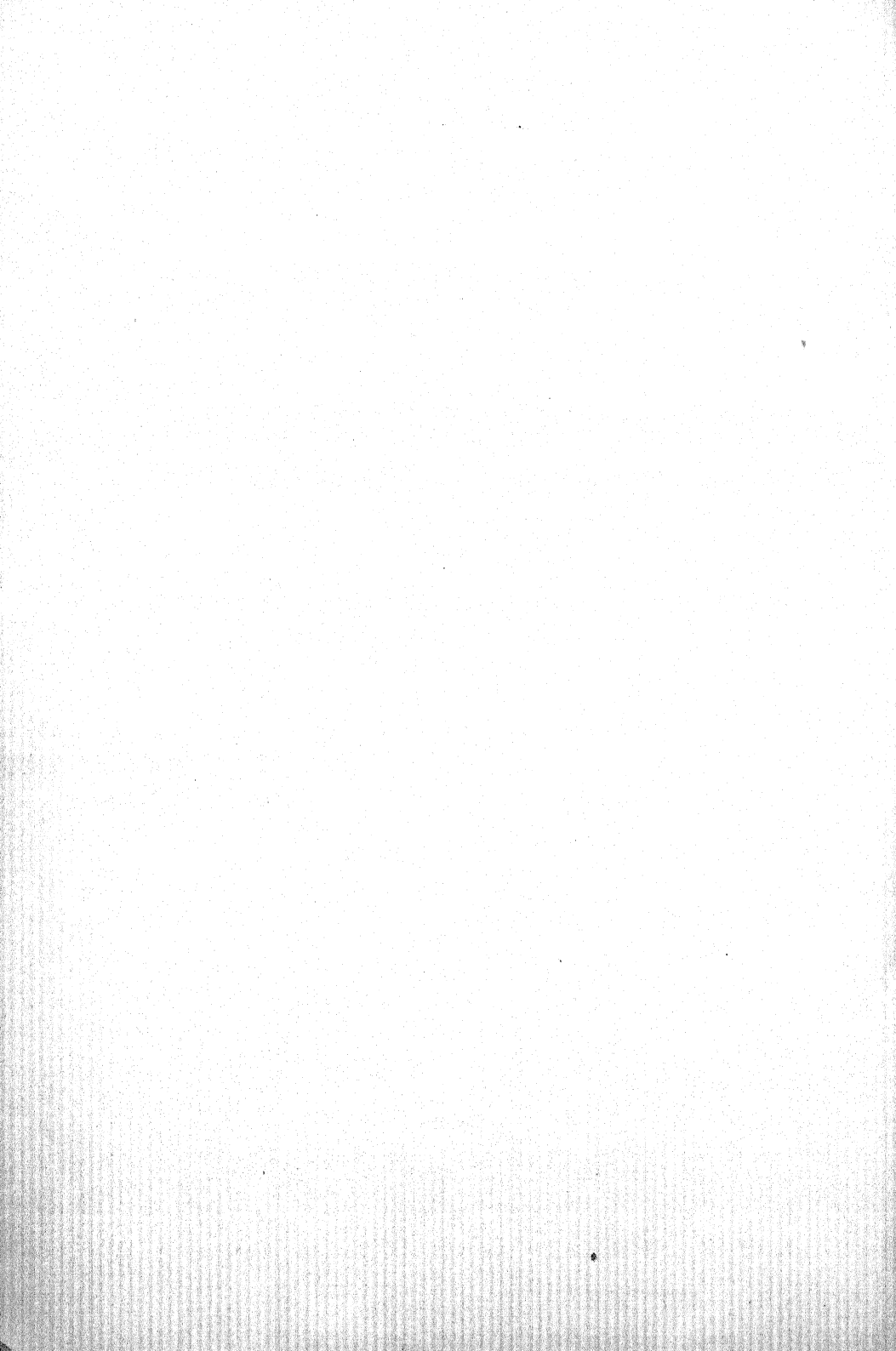


No. 11



No. 13

FRAGMENTS OF PITHOI FROM PRINIÄ AND HAGHIOS ILIAS



advanced. The undulated ribbons, which in some of the latter constitute the simple horizontal bands, are not here continuous, but split in a way to form the well-known motive of the interrupted spiral, so common as well in the Mycenaean as in the succeeding Geometric style.¹ The technique, for the rest, is the same, each undulation indicated in relief, and crossed by close notches marked with the skewer while the clay was soft. To this ornament is superadded a plain band ornamented with a row of several concentric circles, which, as is well known, are likewise a decorative element frequent in the most ancient ceramics, as well in the painted examples of Crete herself² as in the reliefs, such as in another fragment of a Cretan *pithos*³ and in some others of Rhodes,⁴ of Acanthos near Cnidos,⁵ and Boeotia.⁶

II

Also with the same very ancient class is connected another fragment from Prinià (PLATE XIII, No. 2), which still preserves the primitive reticulated and fishbone motives; but in these is observable the continued spiral in its more simple form. Other forms of spirals of this noted capital motive of Mycenaean decoration are offered us in the fragment No. 3, in which still remains a part of the lip and of the shoulder of the vase, and in two other small fragments from Hagios Ilias (PLATE XIV, 1, 2).

Characteristic above all is the combination of the spirals in these two last: in the first we have two parallel lines, but in opposite directions, and linked one in the other; in the second, double spirals equally enchained within little squares stamped upon the fresh clay, which alternate with circlets. Of this second case we have the exact repetition, although in a contrary sense, in a fragment of *pithos* found near Myndos in

¹ Cf. Orsi, *Am. Journ. Arch.* 1897, p. 273.

² Orsi, *ibid.* figs. 1 and 10.

⁴ Salzmann, *Camiros*, pl. xxvi, 1.

³ *Mon. Antich.* VI, pl. xii, 64.

⁵ Pottier, *Mon. Grecs*, 1888, p. 55, n. 13.

⁶ Pottier, *ibid.* pl. viii; so are rendered jewels and metallic rings in female ornament.

Caria;¹ and for the system of parallel lines and joinings, analogies are not wanting in the same class of *pithoi*, as for example in a specimen from Rhodes². We see this same motive occur also in another object, where the affinity with the ornamentation of the *pithoi* was justly remarked, that is, in a thin gold plate from Eleusis of orientalizing style.³ It is one of those decorative forms which this same style inherited from the Mycenaean type; it is enough, for that, to recall the stele of Mycenae,⁴ the ceiling of Orchomenos, and above all, one of the Mycenaean ponsiards,⁵ where we have the rosettes also combined with the spirals; hence our No. 1 in PLATE XIV may be considered as a variation of the latter ornament. As regards the use of the spiral as a decorative element of the Cretan *pithoi*, we can add to our own also other known examples.⁶

III

The rosette ornament, which we have already met with in the fragment just mentioned, has a large share in the decoration of the fragments Nos. 3, 6, of PLATE XIV—they also coming from Haghios Ilias,—as well as in two from Prinià (Nos. 4, 5, in PLATE XIII), and in one of Cnossus, reproduced here (Fig. 1), in which it is found either alone or combined with other elements, such as lozenges and circlelets. In some of these fragments are preserved the horizontal bands in relief, which subdivide the surface into various zones, decorated with other elements, such as the undulated ribbon, the bosses, and a curvilinear

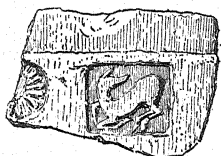


FIGURE 1. — FRAGMENT OF
PITHOS FROM CNOSSUS.

¹ Paton, *Journ. Hellen. Stud.* 1887, p. 79, fig. 26.

² Salzmann, *Camiros*, pl. xxv.

³ Εφημ. Αρχ. 1885, pl. ix, No. 1; Collignon, *Hist. de la Sculpture*, I, p. 88; cf. Boehlau, *Jahrb. d. Inst.* 1887, p. 61.

⁴ Schliemann, *Mycenae*, p. 149, fig. 140.

⁵ Perrot-Chipiez, *ibid.* VI, pl. xvii, 2.

⁶ Compare the fragment from Lyttos, *Ath. Mitth.* 1886, pl. iv, p. 147; *Mon. Antich.* VI, p. 196, fig. a.

ornament (PLATE XIV, No. 6), resembling, so far as we can judge from the minute pieces, that of PLATE XIII, No. 6. Sometimes (PLATE XIV, No. 3) there are subdivisions made by vertical bands.

As is known, the undulated or serpentine ribbon is one of the most ancient and widespread motives, and we find it not only in the *pithoi* of Cnossus, but even in a Trojan fragment of the Second City;¹ and then also in the *pithoi* found in Etruria;² in the Boeotian *pithoi* we meet with actual serpents, as in several Mycenaean and later vases.³ The bosses, however, and the rosettes, so common in Mycenaean decorations, are evidently derived from the ornaments *au repoussé* of the thin metallic plates, such as we see in the famous gold ornaments of Mycenae. The best comparison is offered us in the fine diadem published by Schliemann,⁴ in which we have the rosettes more naturalistic with oblong petals, as in our PLATE XIII, Nos. 4, 5, and PLATE XIV, Nos. 5, 6, — here also sometimes set in a circle, — as well as the more conventional rosettes, the petals of which are represented by bubbles blown out round one in the centre, as in No. 4 of PLATE XIV. This form, quite peculiar to the technique of the metal, gives us the confirmation of the above derivation. Especially characteristic is the lower rose in No. 5 of PLATE XIV, which is formed of spirals bent in the V-form and set opposite each other, which are peculiar to some gold objects of Ilios and Mycenae.⁵

The adaptation of such decoration to terra-cotta is offered to us in a fictile fragment,⁶ from Mycenae itself, in another from Tiryns,⁷ in a slab of painted terra-cotta from Rhodes,⁸

¹ Schliemann, *Ilios*, p. 317, no. 156. ² Pottier, *Vases du Louvre*, pl. ii.

³ 'Εφην. 'Αρχ. 1892, pls. viii, ix; *Bull. Corr. Hellén.* 1898, pls. iv and vi; cf. also De Ridder, *ibid.* p. 441, and Wide, *Ath. Mitth.* 1897, p. 237.

⁴ *Mycenae*, p. 265, fig. 281.

⁵ Schliemann, *Ilios*, p. 544, no. 834; p. 551, nos. 873, 874; *Mycenae*, p. 383, fig. 458, and p. 407, fig. 500.

⁶ *Arch. Zeit.* 1886, pl. A.

⁷ Furtwängler-Loeschke, *Myk. Vasen*, p. 53; Pottier, *Bull. Corr. Hellén.* 1888, p. 495.

⁸ Salzmann, *Camiros*, pl. xxix, 1.

etc. They are also sufficiently common in the Cretan *pithoi*, as is seen in the fragments already known,¹ and in others yet inedited, but which will be published by me.

Worthy of particular attention is the Cnossus fragment, reproduced in Fig. 1, above, where, besides the rosette, we have a quadruped (antelope?) which falls forward on the forelegs, at the same time turning the head back. As we see, it is the type of the wounded quadruped, not rare in the works of Mycenaean art,² but above all in the Island-stones.³ The very way in which the figure was executed, that is, by means of a mould upon the damp clay, completes the analogy. Besides, we see it reproduced, together with the rosettes, in the above-mentioned thin plate of gold from Eleusis.

IV

The three fragments from Prinià, reproduced in PLATE XIII, Nos. 6, 7, 8, made part of one and the same *pithos*, or in any case of similar jars. The first preserves a small portion of the neck, and a part of the shoulder separated from that by means of a projection at an acute angle. The ornament below, formed by a series of arches reversed and joined together, each having in the middle a sort of almond, reminding us of the leaves of the architectural *cymation*, which we see imitated in the already mentioned fragment of Lyttos. Also, the ornaments of Nos. 7 and 8 clearly imitate classic forms of spirals and palm leaves combined together. The circlets, again, which we see stamped in these examples, as well as in some of the preceding ones, have really the appearance of those so frequently applied by puncture upon metallic leaves; a very ancient example of their application upon terra-cotta may be seen in the fragment of a Trojan *pithos*.⁴

¹ Compare the fragment already mentioned, from Lyttos; *Mon. Ant.* VI. tav. xii, 64, 65.

² Cf. the falling wild goat, on an ivory from Spata; Perrot-Chipiez, *ibid.* VI, p. 827, fig. 405.

³ *Ath. Mitth.* 1886, pl. vi, 9 and 18; cf. *Ann. d. Inst.* 1885, tav. GH, 3.

⁴ Schliemann, *Ilios*, p. 317, no. 156.

V

To a much more advanced period of art belong two other fragments, found by Halbherr at Praesos (Fig. 2), and the other of Prinià, on PLATE XIII, No. 9, which present architectural forms and classic ornamentation. Both formed part of the necks of large *pithoi* like those before mentioned of Lyttos, which hitherto remained the only example of this type. Most especially similar to the Lyttian is the Praesian fragment, which has, also, near the mouth, the cymation, with leaves derived from architecture; in place of which, in the Prinià fragment, we see two rows of little quadrilateral hollows,

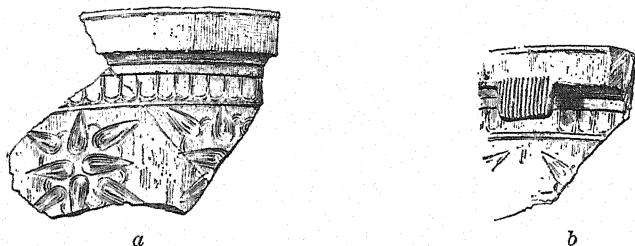


FIGURE 2.—FRAGMENTS OF PITHOI FROM PRAESOS.

which remind us of the lace work also represented in the gold leaf from Eleusis mentioned above. Differing, however, from the fragment of Lyttos, which has a frieze of horsemen round the neck, in both our fragments are merely represented ornaments: in the one case the well-known elegant plaited ribbon and a row of zigzag; in the other a row of rosettes and stars, an ornament frequent in the Ionic painted vases,¹ and also in Ionicizing fictile reliefs,² and of which some examples have already been offered us from Mycenae³ itself.

¹ Cf. some specimens in *Röm. Mitth.* 1887, pp. 171 ff.

² Cf. the frieze of Velletri; Pellegrini, *Studi e Materiali di Archeol.* no. 1, p. 17, figs. 9 and 10.

³ Schliemann, *Mycenae*, p. 268, figs. 285 ff.

VI

The fragments which follow present an ornamentation much richer and more varied from the addition of figurative elements depending upon types which all belong to the true classic repertory of mature archaic art.

In the fragment from Prinià on PLATE XIII, Nos. 10, 11, we see the remains of three zones. Two of these preserve decorative elements from the more ancient repertory; one, for instance, has the double spirals analogous to the preceding No. 8 of the same PLATE, the other the rows of undulations; but the middle zone contains a fine frieze with sphinxes placed in heraldic fashion amid lotus flowers and little palm branches, and several times repeated, as we deduce from a paw which is seen at the right extremity, and from the scanty remains of the face of another to the left. It is a decorative whole (*ensemble*) often seen in the archaic painted vases of orientalizing style, and afterwards continued in those of more advanced style, as in the François vase; in all which, however, it is already passed into a secondary place. Here, however, it still constitutes the principal element of the ornamentation, which points us to an epoch still very ancient.

The sphinxes appear here in the characteristic type of Greek archaism, with the wings curved after the Greek-Oriental manner and with the hair in a large tress subdivided by several bands, from which an isolated tuft detaches itself at the vertex, and curls at the end according to that ornamental form in which Greek art translated a characteristic trait of the Oriental mode of hair-dressing.¹

Remarkable is the distinct analogy which they, as well as the anterior, have with the corresponding elements in the decoration of two metallic objects, viz., the two well-known cuirasses of Olympia engraved with lines but slightly incised,²

¹ Furtwängler, *Olympia*, IV, pp. 153 ff.

² *Olympia*, IV, pls. lviii, lix; *Bull. Corr. Hell.* 1883, pls. i-iii. Cf. Furtwängler, *l.c.*

notwithstanding some trifling differences in the wings and hair of the sphinxes, and the absence of wheel appendices in the palms. The heraldic type of the sphinxes stamped upon terracotta is found also in a fragment from Tanagra.¹ But the style of the metal is clearly apparent in the ornament of the frieze which is before us, executed in an extremely finished and precise manner.

VII

Of the same kind and derivation as the preceding is the fragment reproduced in PLATE XIV, Nos. 10, 11. Here, also, as a secondary ornament, we have the remains of a spiral stripe with stamped circlets, and above these a figured frieze of exceedingly delicate workmanship. To the left is a young horseman who spurs his horse to the gallop toward a tripod; to the right we see, rather broken, a biga in full course driven by an auriga, with the usual long frock, and under the horses a hare, which is running away from a hound. Here, then, are assembled three different types of races, which are among the most characteristic elements of archaic decorative art. I scarcely need mention this frequency in figure-painted vases. I confine myself here to recall, for chariot races, the François vase, and for the simultaneous reunion of all these three types the Corinthian vase with the Parting of Amphiaraus;² where the tripods placed, as in our case, between the racers, indicate races for prizes. Except that in these examples the types aforesaid are already seen modified to express particular and determined subjects, and the hare, which is seen running under the horse's heels of Amphiaraus, is nothing but a reminiscence of the very ancient chase of the said animal.

In our fragment, however, they still preserve their generic and indeterminate character, as usually in the pottery in relief, of which they seem to be amongst the most familiar types. Thus a fragment of Tiryns presents us a horseman on the gal-

¹ *Bull. Corr. Hell.* 1888, p. 496, no. 6.

² Berlin, *Vasensammlung*, no. 1655; *Wiener Vorlegeblätter*, 1889, pl. x.

lop,¹ and another, said to come from Cythnus,² exhibits a zone with youths racing toward a tripod, as in the present fragment from Prinià, and then a second with bigas likewise racing one after the other, and we see these reappear in a fragment from Athens.³ We see the same motives then frequently reproduced upon terra-cotta reliefs found in Italy, as in two fragments of vases coming as it seems from Caere,⁴ and in some friezes from Velletri, Poggio Buco, and elsewhere.⁵ For the representation of the hare, which in the above terra-cottas of Velletri is seen alone without the dog, deserve to be particularly mentioned, besides the examples quoted by Löschcke,⁶ some pieces of Sicilian *pithoi*.⁷ Löschcke himself has there demonstrated to us the high antiquity of this type which we already find painted on the fragment of a vase from Mycenae,⁸ but which seems to have been more particularly proper to the art of metal-work, to which belongs the Hesiodic shield of Heracles (v. 302), where it appears in the most complete form, with animals and huntsmen, as is seen in many works remaining. In our case, as frequently in relief pottery of archaic types, we see the hare employed as a means of filling up the vacant space between the horses' legs, without any relation to the main representation. An analogous custom we meet with in the figures of dogs running along with the quadrigas, as shown in a sarcophagus of Clazomenae,⁹ together with which may be cited also a marble relief found in Asia Minor,¹⁰ having the chariot race for its subject. The derivation of these two monuments may serve as an indication what was the art which made such types its own, and what the decorative motives which appear already in the very ancient *stele* from Mycenae.¹¹

¹ *Bull. Corr. Hell.* 1888, p. 496.

³ *Ibid.* p. 499, no. 12.

² *Ibid.* p. 500, no. 15.

⁴ *Ibid.* p. 506, note 1.

⁵ Pellegrini, *l.c.* I, pp. 91 ff. figs. 2, 3a, 9, 10.

⁶ *Arch. Zeit.* 1881, pp. 33 ff.

⁷ Kekulé, *Terracotten von Sizilien*, p. 49, fig. 105, with pls. lv. 2, and lvi. 1.

⁸ Perrot-Chipiez, *l.c.* VI, p. 934, fig. 496.

⁹ *Monuments Piot*, IV, pls. iv-vi; Studniczka, *Siegesgöttin*, pl. iii, fig. 18.

¹⁰ Roscher, *Lexikon*, I, p. 1767.

¹¹ Cf. the *stele* from Mycenae with antelopes chased by a lion; Perrot-Chipiez, *l.c.* VI, figs. 359 and 364, and the dog on the ivory fragment, *ibid.* fig. 410.

Almost a variation of the same motive of running animals offers itself to us in another fragment from Prinià (PLATE XIV, No. 12), where, instead of the hare, we see a wild goat, as it would seem. The same figures are repeated several times, as we infer from the tail and the feet of a second dog, which remain at the right extremity. They have not here a subordinate place as in the preceding case, but form the whole ornament. And also the subjects of weaker animals pursued by the stronger are, as is known, among the most ancient decorative elements.

VIII

Also No. 13 of PLATE XIV exhibits to us a very familiar type in archaic art, that is, the eagle flying, several times repeated, in small fields bounded by zigzag borders. The ornamental use of this type is frequent in black-figured vases; for example, in the already quoted vase of Amphiaraus, and then also in the most varied manifestations of archaic Greek art, above all in Graeco-Oriental works.¹ Nor is it wanting in the ornamentation of fictile reliefs, as in some examples from Sicily,² and in a well-known plaque formerly in the De Luynes collection.³ Also the coins make use of this same type, which we find for example in those of Chalcis,⁴ and in Crete herself in those of Lyttos.⁵ Worthy of observation is the method in which the flying fowl is depicted in our case. In the archaic works, and so in the examples just now cited, the difficulties of perspective are evaded by the expedient of representing the body in profile and the wings in front view, as if the eagle were looked at from above. Here also use is made of the same means, but in a yet more imperfect manner, and hence, as we may be permitted to believe, more primitive; that is, the head only is represented in profile, and all the rest —

¹ Cf. Furtwängler, *Goldfund von Wettersfeld*, p. 24; *Olympia*, IV, p. 105, no. 708; Studniczka, *Jahrb. d. Inst.* I, p. 193.

² Kekulé, *l.c.* pls. iv, 2, and lvi, 1.

³ *Gaz. Archéol.* 1883, pl. xlix.

⁴ *Catalogue of Greek Coins in the British Museum*, Central Greece, pl. xx, 7.

⁵ *Ibid.* pl. xiii, 12 ff.

body, wings, and claws — in the front view. Nor less peculiar is the heart-shaped fashion of the back, the triangular form of the wings, and the fan of the tail, — an *ensemble* producing the effect of a figure in beaten metal-work. After the golden eagle, still more conventional, of Ilios,¹ we can say that in this fragment of a *pithos* we have one of the most ancient examples of the type.

IX

An extraordinary type, to which I can offer no analogues, is given us in two fragments (PLATE XIV, Nos. 7, 8), evidently of one and the same *pithos* from Haghios Ilias. In both is repeated the more or less fragmentary figure of a monster, contained (see No. 8) within rectangular fields, with cornices adorned alternately with rosettes and spirals. The body shows leonine forms, but the long neck and the head are rather of the feathered kingdom, and resemble those of the goose or the swan. If the existence of a second neck, which seems to prolong itself horizontally from the point whence springs the erect neck, were quite certain, we might imagine a creature with several heads, like the Hydra, the Chimaera, and Cerberus, — well-known necks, however, which have no analogy with these. It seems we cannot even think of a griffin in this case. Meantime it will have to be regarded as one of those fantastical, indeterminate creations, resulting from the mixture of divers natures, such as we have not a few specimens offered us in the engraved Island-stones.

X

The fragment from Haghios Ilias published in PLATE XIV, No. 9, is evidently a portion of the neck of a *pithos* like the one often mentioned of Lyttos, after the same manner as the above-described fragments on p. 409. Here also we have architectural forms, that is, an edge and a throat, and below these are figures, which seem framed in fields like metopes

¹ Perrot-Chipiez, *L.c.* p. 960, fig. 523.

by means of vertical stripes, of which one is in preservation to the right. Of the two figures exactly alike, which are upon the remaining piece, one has disappeared, leaving at the same time its impression upon the bottom on which it was fastened ; of the other only the upper portion remains. Instead of horsemen or other human figures here (as in the Boeotian *pithos* edited in 'Εφημερίς Ἀρχ., 1892, pl. viii) is represented a divinity. The cylindrical head-dress or *polos* she wears, which in the most ancient times was a distinction of almost all the female deities,¹ indicates a goddess. She holds a shield before her breast, and above this is seen the top of a two-edged axe, rather than a sword, as well from the shape of the weapon as from the manner of holding it. We have then a goddess of war, and obviously intended for Athene, who might very well be represented in most ancient times with the *polos* on her head ; and in fact, we know there was a statue of the sixth century B.C., by Endoeus in Erythrae, representing her with a like attribute.² The rigidity of the attitude, and the way of holding the attributes, recall a very ancient form of *Palladium*, although neither in the Athenian terra-cottas³ nor in other monuments do we meet with a similar type. For this we must perhaps look into a still remoter age. In a gold signet, and in a mural painting of Mycenae⁴ we see the figure of an idol armed with shield and lance ; and besides, in the field of the first, a two-edged axe, which has been also connected by others with the same idol. If it is certain that this arm is really meant also in our relief, we could suppose a correspondence between it and the Mycenaean idol. There are some who have thought they could interpret the latter as the image of Zeus the Cloud-gatherer ;⁵ but as the shield and lance are more appropriate to Athene than to him, it seems more natural to refer that representation to the goddess herself, because her

¹ Furtwängler, *Sammlung Sabouroff*, pl. xxv, with text.

² Paus. VII, 5, 9.

³ Cf. *Arch. Anz.* 1893, pp. 141 ff.

⁴ Schliemann, *Mycenae*, p. 457, Fig. 530 ; 'Εφημ. Ἀρχ. 1887, pl. x ; Perrot-Chipiez, *l.c.* figs. 425 and 440.

⁵ Tsountas, *Μυκηναί*, p. 161 ; Tsountas-Manatt, *Mycenaean Age*, p. 298.

symbols express a divinity of meteoric significance, equally with her father Zeus; and survivals of this conception are to be found also in less ancient monuments.¹ The two-edged axe, which would be quite the most expressive sign of such a significance, in the fragment of Cretan *pithos*, would be placed in still closer relation with the deity who holds it as her attribute. We have then in this case a type of Palladium, which would stand midway between the common classic type and the Mycenaean symbol; and in this connection the denomination Palladium would be still better justified, which has been given to some symbolic objects looking like an abbreviated form of the idol above mentioned² which we see repeated also on the summit of the besieged city represented upon the well-known silver fragment from Mycenae.³

The series of fragments of pithoi which we have been examining demonstrates that the art of pottery decorated with reliefs was not only largely cultivated in Crete, but that it had there a much longer duration than we have hitherto been able to verify in other places. From the Mycenaean epoch, represented by the *pithoi* of Cnossus and the fragments which relate to these, the industry continued to flourish, at least to the classic-archaic epoch, to which belong the fine fragments with ornaments and figures proper to the decorative repertory of the same. The connection we have met with in several particulars between these Cretan fragments and the terra-cottas in relief of other derivation, shows us how such an industry enters into an identical artistic current, which from Asia Minor spreads abroad to Sicily and Italy, revealing even a special character, by which it is distinguished from like products of other centres. The relation, already observed by others, between this kind of products and those of metallotechnic, is seen confirmed by the preceding analysis; and even the hypothesis that ceramic art

¹ Cf. *Röm. Mitth.* 1897, pp. 315 ff.

² Gardner, *Journ. Hellen. Stud.* 1892, pp. 21 ff.

³ *Εφην.* *Αρχ.* 1891, pl. ii, 2; Perrot-Chipiez, *l.c.* p. 774.

in relief may have preceded, at least in some places, painted decoration, seems strengthened by the examination of our fragments, which represent to us a long development rather anterior to than parallel with the art of the painted vases. This industry, which continues to flourish in other places, in Crete, after the period of the Mycenaean and Geometric styles was substituted exactly by that of the vases in relief, of which a remarkable exhibition are the fragments above illustrated; but still more complete and important specimens exist in the Museum of the Syllogos, which will be by me shortly published.

LUIGI SAVIGNONI.

ROME,
April, 1899.

CRETAN EXPEDITION

XIX

A VISIT TO PHAESTOS

ἔστι δέ τις λισσὴ αἰπεῖά τε εἰς ἄλα πέτρῃ
ἔσχατιῇ Γόρτυνος, ἐν ἡεροιδεῖ πόντῳ·
ἐνθα Νότος μέγα κύμα ποτὶ σκαῖον ῥίον ὠθεῖ
ἐς Φαιστόν· μικρὸς δὲ λίθος μέγα κύμ' ἀποέργει.

— *Od.* III, 293-296.

THE interesting monograph of Arthur J. Evans, inserted in his volume on *Cretan Pictographs*,¹ has already shown distinctly the great importance, from the point of view of the primitive Cretan and Aegean culture, of the sepulchral deposit discovered a few years since during agricultural works at Haghios Onuphrios, a quarter of a mile north of the double acropolis of Phaestos, on the road leading to Dibaki; of which the material, preserved in the Museum of Candia, reveals a degree of culture equal to that given by the discoveries at Amorgos and others of the Cyclades, belonging to a period anterior to the Mycenaean, which from the island where it was first studied is called by many the "Amorgine."²

When I was at Candia, the material from Phaestos was very well arranged and sifted, and I hope the watchful care of the president, I. Hatzidaki, and the secretary, S. Xanthudidi, will

¹ Evans, *The Sepulchral Deposit of H. Onuphrios near Phaestos in its Relation to Cretan and Aegean Culture*, in *Cretan Pictographs*, London, 1895, pp. 103 ff.

² Dummler, *Ath. Mitth.* 1886, pp. 15 ff.

have availed to preserve it from dispersion during the last disasters which have visited the city of Candia.

This discovery was notable for the contribution it made to Evans's remarks upon the series of pictographic or primitive writing, of which he found so many traces in Crete and the Aegean; here were in fact some seals in the form of scarabei, and repeating a spiral motive common to the Egyptian scarabei of the Twelfth dynasty, others of triangular shape, or conical, or cylindrical, others finally in the form of an eagle; here were two *nerita* shells with a common whorl in steatite and terracotta, on which were represented circlets or leaves, figures of men and animals; specially interesting a spiral motive fully developed, and related to the early Egyptian class. Besides these seals, which have analogues found elsewhere in the island, and in Syria and Egypt, the deposit of Phaestos contains a quantity of beads of various materials—steatite, rock-crystal, variegated limestone, and gold; these pendants, in the form of spirals, narcissus flowers, small granulated globes, have their analogues in similar objects found at Mycenae, Hissarlik, Arne, Menidi, and were therefore in use during the whole Mycenaean age. The pottery of the deposit exhibited the typical little clay spheroid vases of a dark blackish brown color, with perforated handles for suspension, and a cover with four additional handles, answering to those of the earliest strata of Hissarlik and of the settlement of Tiryns; small vessels, with spouts, of the same dark paste, and small reddish brown vessels with four handles, two of them for suspension, with double vertical perforations; and another vessel very similar to those found in the early cemetery of Haghia Paraskevi in Cyprus. There were also vases of a more advanced technique, but still hand-made, painted with a dull surface; round-bottomed *oinochoae* with pale yellow ground and dark red colored stripes; a kind of pyxis with white bands on a terra-cotta ground; jars with red and white stripes on a grayish black ground which shows a distinct approach to those of the earliest vases from Thera and Therasia, and, ac-

cording to Mr. Evans's opinion, standing in direct relation to a very beautiful type of stone vase which was in vogue in prehistoric Crete. The deposit yielded a small limestone vase, with its lid of the same material and type which forms a characteristic feature in early Cretan tombs, affording in certain cases a definite chronological clue, by a very close resemblance to archaic Egyptian classes from the eras of the Fourth to the Sixth dynasties.

If H. Onuphrios was not such a prolific trove-spot of stone vessels as Arvi, on the southeastern coast of Crete, it brought to light a series of marble "idols" of essentially the same class as those found in Amorgos and other Greek islands, bearing witness to a degree of evolution of form which seems to Mr. Evans to indicate the lapse of a considerable period of time. These begin with summary types, where the human form is scarcely hinted at, as in the most ancient examples of Troy, and go on up to the most developed types, in which the body and limbs are distinctly delineated as well as the salient features of the faces, and the male and female characteristics, especially in the two idols represented by Evans in Figs. 130 and 131, where are clearly indicated, as in the small idol of Siteia, the rounding of the bosom. It is this complete series which offers Evans the opportunity to refute, as Reinach did before him, the traditional idea that these small idols can be degenerated copies of early Chaldean prototypes representing Ishtar or the mother-goddess, and to show how the Aegean idols have a great quantity of analogues or duplicates in the prehistoric, the Neolithic, the Eneolithic strata, and the Bronze Age of Thrace, the Danube valley, Transylvania, Poland, the Baltic shores, and further west in Italy, Spain, Britain, and especially in the tombs of the Reindeer Period.¹

The deposit near Phaestos also contained bronze weapons, two specimens of which are preserved; one of them is a flat

¹ S. Reinach, *La sculpture en Europe avant les influences gréco-romaines* (*Anthropologie*, 1894, pp. 15-34, 173-186, 288-305, 1895, 18-39, 293-311); cf. M. Hoernes, *Die Urgeschichte der Kunst*, in *Anthropologie*, 1898.

bronze dagger-blade of a form which also occurs in the earliest graves of Amorgos; the other is a double-pointed spearhead of the same type as that which occurs as a characteristic weapon in the hand of a Lycaonian warrior on the well-known stele of Iconium,¹ and of which so many examples were found in the tombs of Tel Nebenesh belonging to the Carian mercenaries of Psammetichus I.²

All this interesting material, furnished by an accidental excavation, awakened in Professor Halbherr and myself the hope that some trial made along the flanks of the Acropolis of Phaestos and in the neighboring plain might produce some important result; if the deposit at H. Onuphrios, a quarter of a mile from the Acropolis, had given a poor supply of grave chattels, such as would be that of a single individual, or a family of low degree, how much more would be discovered if it should prove to be our good fortune to come upon the tomb of some chiefs of Phaestos. But the times were not promising for a systematic research; nevertheless, neither few nor quite fruitless were the researches it was practicable to carry out, though with only slight interest for the topography of the ancient Cretan city.

The topographical indications given us by the ancients, although not very ample, are all very clear and precise, and are not open to doubt. In fact, in Strabo, we find indicated two precise distances: one of sixty stadia from Phaestos to Gortyna, and the other of twenty stadia from Phaestos to the sea,³ — distances which correspond very well with the hill of Haghia Photiá, rising between H. Joannes and H. Onuphrios, to the south of the river Geropotamos, the ancient Lethaeus, — and forming part of the group of lower hummocks of the Pliocene Period, which rise at the extreme western limit of the plain of Messarà, and which form a well-defined division between this

¹ Perrot, *Hist. de l' Art*, iv, p. 741, fig. 359.

² Flinders Petrie, *Tanis*, II, pl. iii, pp. 20, 21. Evans says that these two-forked implements in the graves of these mercenaries may be due to some religious survival.

³ Strabo, X, 734.

plain and that malarious low one of Dibaki,—sinking gradually down toward the broad, solemn bay (see Fig. 1).

The Homeric statements, contained in a passage of the *Odyssey* (iii 293; cf. Eustathius, III, p. 1468), must be understood in a broad sense; the poet, taking in the whole Gortynian territory,

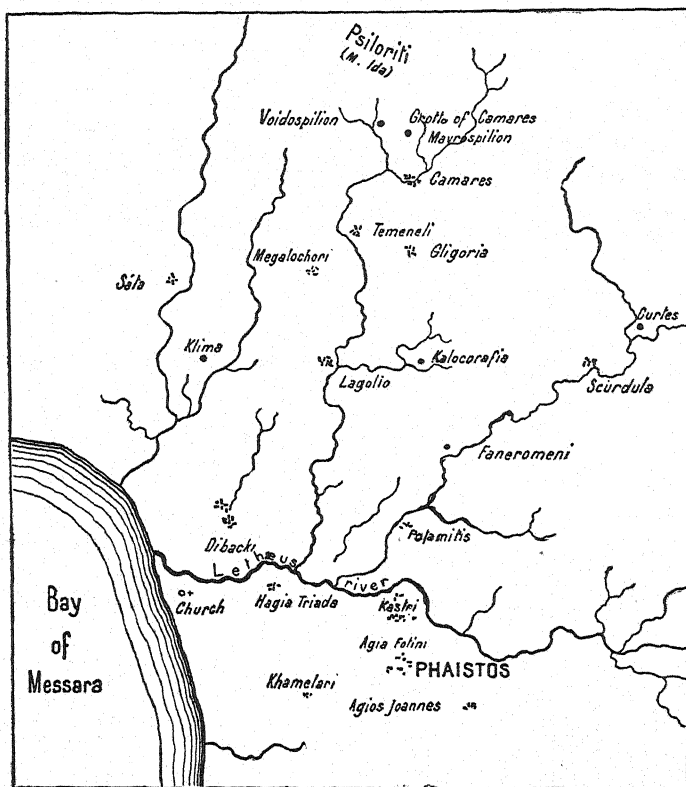


FIGURE 1.—PHAISTOS AND VICINITY.

rightly mentions Phaestos in relation to the sea, and calls up the image of its foaming waters dashing against the steep and polished precipices of a rocky shore. He does not confuse these with the city, but mentions them as characteristic of the Phaestian landscape. The Byzantine commentator, however, took the λισσὴ αἰπεία (smooth headland or cape) to

be an inhabited place belonging to the district of Phaestos.¹ And so it was, probably, whereas at the time when the Homeric rhapsodist described the place, he must have been struck by the view of the bay and the shore; because toward Kamelari, where the hills of the Phaestian group sink down, there rises abruptly from the seashore a lofty mass of bare rock, against which during the high tides of winter the waves lash furiously, driven by the winds from the open sea without let or hindrance. During the Roman era, however, when the great commercial centre of Gortyna, with its port, Matala, was flourishing, there was near this headland a cluster of dwellings, occupied probably by seamen and coast guards, forming a street called, after the polished rock, Lyssos. This justifies not only the description of Stephanus of Byzantium, but also the passage of Strabo (X, p. 734), *καὶ ὁ Λισσῆς δὲ τῆς Φαιστιάς*, so variously read and discussed, but which refers to a city, or better an inhabited place so called, in the territory of Phaestos.²

Phaestos is a strong place, defended on the north by the Geropotamos, and on the east by a little stream, *ρύακι*, which descends from the Kato Riza, passing near Gussés and joins the Lethaeus with a watercourse nearly dry at all seasons, but with banks high and steep enough to constitute an obstacle.

In reference to Phaestos, I observed, as in the case of so many other Cretan cities, that the district occupied consists of an Acropolis, around which grew the primitive settlement, and a tract of plain at its feet, where were the dwellings of the citizens, and at a later date the quarter of their Roman masters.

The Acropolis, as given in the plan (Fig. 2), is the extreme eastern limit of the above-mentioned group of hills dividing the two plains of Dibaki and Messarâ; it is a long and narrow crest united by a neck to the rest of the group, and erecting

¹ Stephan. Byz., *Φαιστός*· ἔστι τῆς Φαιστιάδος καὶ ὁ καλούμενος Λισσῆς· "Ὁμηρος ἔστι δὲ τις λισσὴ ἀπέειά τε εἰς ἄλλα πέτρην.

² Hoeck, *Kreta*, I, p. 410; Salmasius, *ad Solinum*, c. 11, 17, p. 118, edit. Water, 1879.

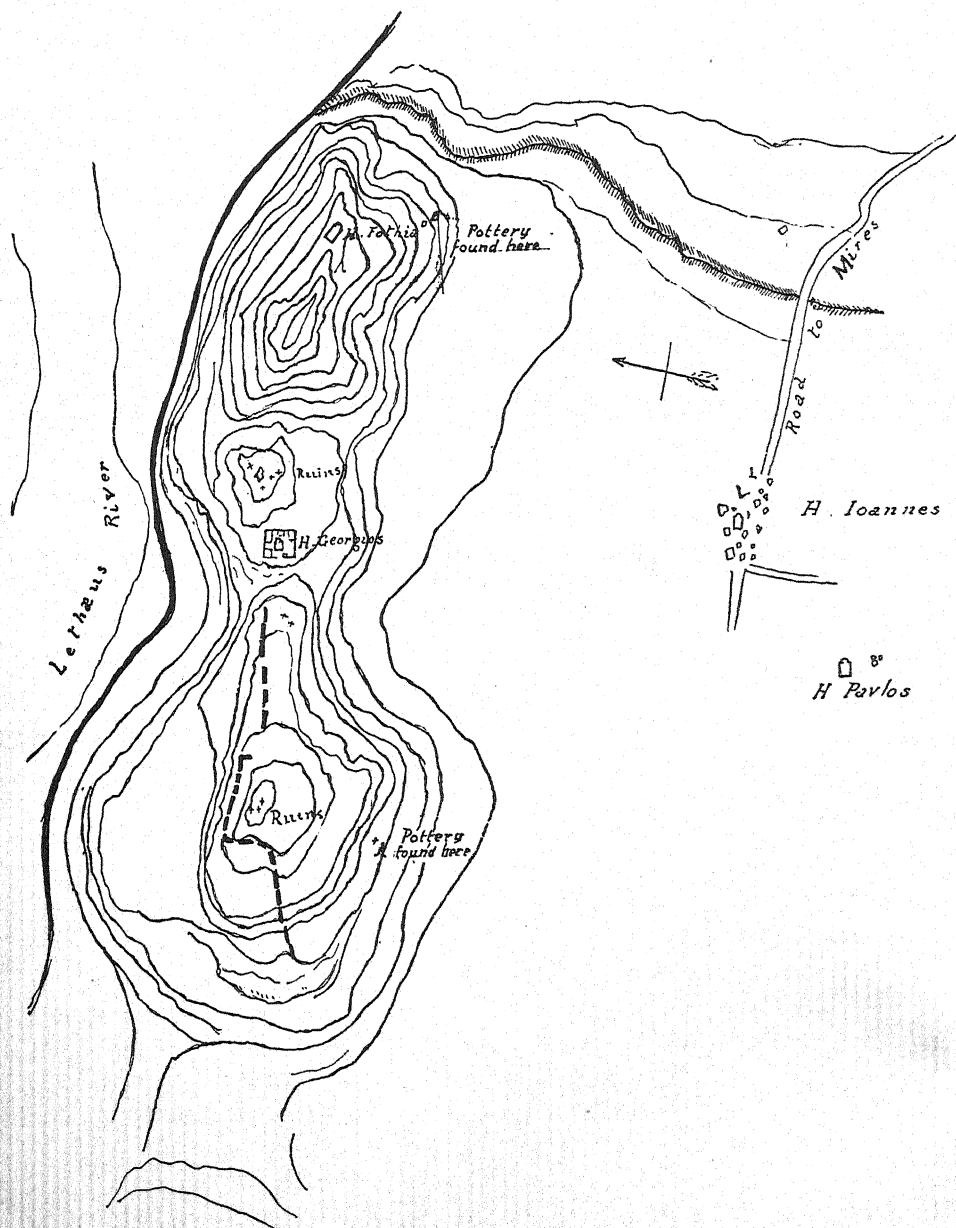


FIGURE 2.—THE ACROPOLIS OF PHAESTOS (BIRD'S-EYE PLAN).

itself with a double head about 100 m. above the plain. This twofold Acropolis is washed on the northern side by the river Lethaeus and east by the channel of the dried-up stream already mentioned; toward the south it descends into the fields and olive-yards surrounding H. Joannis. The eastern cliff of the Acropolis, narrower and still steeper, bears on its slope the chapel of H. Photiá, which has given its name to the whole hill; somewhat broader is the western summit, about 70 m. above the plain, with slopes less steep, and a tract of plateau on the north descent, preserving traces of ancient works of defence; in the depression between the two summits is the ruined convent of H. Georgios, where yet remain some traces of the wall of circumvallation, as well as the little church and a few half-ruined cells.

All over the Acropolis are scattered abundant fragments of pottery of every epoch, but the remains of buildings above ground are very slight; a fact which, in my opinion, is due to the destruction of Phaestos by the Gortynians. It is especially along the back of the western head of the Acropolis that we perceive a line of wall, built of large calcareous blocks regularly squared and arranged, and still preserving their original place; these we can follow in a certain continuity along the eastern crest, until we reach the summit, where there are traces of a rectangular enclosure, of which I noticed the north and west sides, as well as the two northeast and northwest angles. But without excavations the particulars of this enclosure cannot be easily ascertained, nor can I say anything else about it, except that it rises on the brow of the hill, having in front the steep incline which renders an examination of the wall more difficult at this point; and that it was constructed, or at least faced, on the outer side with blocks of calcareous stone of the medium size, $0.80 \times 0.60 \times 0.40$ m., regularly placed, as in the walls of Aptera¹ and other fortified Cretan cities in the classic period toward the fourth and third centuries, when the restless and litigious Cretan communes

¹ Mariani, *Antichità Cretesi*, in *Mon. Antichi*, 1896 (VI), p. 209, pl. viii.

were at their most highly strung tension. From the southwest angle of the rectangular enclosure are to be seen traces of the wall running westward along the edge of the hill; as well in this tract, as along the eastern crest, there could be no question of enclosure from the deficiency of space, which reduced to a few metres. Probably these two tracts of wall served to couple together the defences of the two acropoleis, as well as to connect them with those which must have existed round the lower part of the town. Such a system of connecting isolated points of defence by means of lines of walls sufficiently long, and thus keeping back the enemy, we find everywhere, and at various epochs. I will quote only the example of the Acropolis of the Lake Copais in the important study of F. Noack, *Arne*,¹ where we have two enclosures of walls, of very ancient date, in which three are joined one to the other by means of a tract of wall 250 m. long, which seems to have had no other purpose than that of giving the defenders of the three forts a line of communication.

Nothing, however, remains visible of the defences along the eastern Acropolis, and much less those of the low city, of which we can merely certify the existence by taking note of the great quantity of fragmentary material which enters into the dividing walls of the several fields; and the quantities of broken pottery spread over the plain at the base of the hill, and all round the village of H. Joannis, in the houses of which also abound the stones and other architectural fragments of ancient buildings. In the little village church I found a Corinthian capital of *poros*-stone, various pieces of an elegant Doric frieze, and other fragments, probably from the Acropolis. Near the church of H. Paulos, 300 feet west of the village, I saw a semicircular basin, still entirely lined with painted pottery, which was known by the peasants as the 'Ελληνικὸ λουτράκι. It was probably a bath or a reservoir for water in some Roman villa. From my examination of the plain, it seemed reasonable to suppose that in process of time the city must

¹ F. Noack, *Arne* (*Athen. Mitth.* 1894, p. 443, pl. xiii).

have occupied a radius of at least 700 m. toward this southern side of the Acropolis.

But, returning for a moment to the hill, I must mention that the narrow eastern summit has no traces of buildings, but is entirely covered with scraps of pottery, amongst which abound those of the black-figured vases.

Some traces, scarcely recognizable however, of masonry are to be found in the depression between the two acropoleis, at the back of the church, in a mound due to the ruins of some building; and here, again, the ground is strewn with broken terra-cotta, some of the fragments plainly belonging to the decoration of an archaic temple. It is to this spot I would direct the attention of the future excavators of Phaestos, since there very probably may have been a temple in that situation; sheltered from the winds between the two acropoleis, and yet commanding the valley of the Lethaeus and the plain of the city, and enlivened by a fine view of the mighty mass of Mount Ida. And this temple would have been one of those dedicated to the divinity recorded by the ancients as venerated at Phaestos: either Aphrodite Scotia or Latona Phytia, whose festival was known by the title of Ecdysia.¹

In view of the ancient origin of Phaestos; in view also of the fact that in these recent years of excavations, so frequently repeated, the cults of the classic age are found to have their seats in the same localities where flourished the cults and sanctuaries of the Mycenaean epoch—that, in short, the architectural and spiritual substratum of every sanctuary of the classic era is a stratum and a survival from Mycenaean days—I had a lively hope of finding upon the twofold Phaestian Acropolis the traces of one of the two temples recorded by the authors, and together with them, those of a sanctuary that reached to the epoch of the necropolis of H. Onuphrios.

And, searching along the walls and the slopes of the Acropolis, I chanced to find, below the western head in the flank

¹ *Etymolog. Magn.* s. *Κυθηραία*. Antonin. Lib. *Metam.* c. 17, p. 118; cf. Hoeck, *Kreta*, I, p. 9; III, p. 144.

turned towards Kamilari, a great mass of ceramic fragments, occupying a space of several square metres, in a cornfield flanking the modern road. (Fig. 2, at A.)

Having obtained permission from the proprietor to make a trial excavation, I sounded the whole of that mass of fragments, more than 2 m. in depth; and although I did not find either the trace of a building nor any regular stratification, because these fragments were in fact a discharge of material from the steep heights above, I was able to collect a considerable mass of fragments of Mycenaean and pre-Mycenaean pottery. From these I expected to select the most remarkable and to take them to Candia, intending to make a definitive study of them at the end of the campaign. But though I was able during the intervals of my excursions through the interior of the island, to examine my booty, classify, and arrange it for catalogues and types; before I could get the collection in order for the museum and reproduce suitably the most important examples, I was struck down, on returning from an excursion on Mount Ida, with a serious illness. This illness gave me occasion to experience the great goodness and devotion of my friend Professor Halbherr and of my Cretan friends,—first of all Dr. Hatzidaki,—but it caused this and other work undertaken by me to remain incomplete, perhaps without prospect of being ever continued.

At the same time, if I cannot give my reader graphic proofs of my assertions, I can at least indicate briefly here the principal types of pottery discovered by me near the cart-road at Phaestos,—types which correspond precisely to those that Evans, Myres, and Mariani, and I myself, studied in the Museum of Candia, which were derived, in great part, from the grotto of Camares, on the south flank of Mount Ida.¹

Setting aside the ceramics of the classic age, from the eighth century B.C. to the whole Roman period, which I found very

¹ A. J. Evans, *Primitive Pictographs*, pp. 79, 81. Myres, *Prehistoric Pottery from Camares* (*Proceed. of the Soc. of Antiq.*, March, 1895); Mariani, *Antich. Cretesi*, pp. 185 ff.

frequent in the great mass, and which served to demonstrate the survival of Phaestos as a centre, even after its destruction by the Gortynians, it was necessary before all to distinguish in the prehistoric pottery two kinds different in make and modelling, or in certain varieties in decoration. In make must be distinguished one ruder kind, made of coarse clay kneaded with grains of stone and extraneous material, and showing a tendency to redden when overfired; and another kind in fine clay, reddish yellow or brown, although not completely mixed, treated in great part by the wheel, although in this class also are not wanting examples worked, like the coarser kind, by hand and with the spatula. Both the rough as the finer kinds have the surface covered with a slip of the same clay more finely levigated, over which is the surface decoration.

Naturally, the vessels of the rough kind were those of larger dimensions, large flat plates of little concavity, fragments of large full-bodied jars with wide mouths, and a kind of basins, with flat bottom and slanting sides and edge rounding off. All these were the types for domestic purposes, and for the most part showed simply a surface made with purified clay, smoothed with the spatula and colored by fire: however, even in this ruder series examples were not wanting with a primitive ornament, either obtained by simple scratched impressions of the fishbone pattern or parallel lines; or else by opaque coloring in zones, of brown or dirty red, along the edges, or crossing each other round the body or the neck of the vase.

Along with this series, which has its analogues in the primitive strata of Greece, I draw attention especially to the finer sort, with the characteristics which the before-mentioned authorities have found in the curious pottery from Camares.

From what could be conjectured from the fragments, the usual forms of this finer class were these two, already noticed by Mariani: a spherical vase slightly crushed, with a large aperture, having neither rim nor hem, which prolonged itself into

a spout or channel of semicircular section, like that of several Theraean vases preserved in the French School at Athens, and in the Abbot collection of New York.¹ The vase has the bottom flat, with a small round edge, and at each side of the mouth a thin erect handle. I noted frequent examples where the spout was not open all the way; but by means of a small opening in the neck the liquor could be poured from the vase into the spout. The other type was a jug of medium size, spherical above and narrowing below into a cone, with a narrow neck like a decanter, and a handle from the neck to the body of the vase.

To these two dominant forms I might add some varieties based on the greater or less dimensions of the body or length of neck, or situation of the handles; they are marked also by a special quality of clay and difference of ornament; since for the most part the spherical vases are of very carefully prepared clay, and are well baked, like the Mycenaean vases of the best kind, covered with a black, almost shining, enamel, while the decanters, also of fine clay, have mostly a yellowish enamel. The decoration of these vases is of two kinds, plastic and pictorial, and both are to be found in the same vase.

The plastic decoration consists in tiny protuberances like beads, regularly sprinkled over the whole surface; or else, as Mariani remarks, in a species of marbling in convex faces, and in salient protuberances, which must have been modelled in the fresh clay, of little density, which formed the slip of the base, and which, like the *barbottine* in modern ceramics, had to be obtained by means of tearing off by the hand from the surface of the vase. The plastic decoration, in both these two forms, is so treated as to let it be seen that it preceded the pictorial in the decoration of the vase, since these were marbled zones surrounded by bands of color, with white spots corresponding to the concavity, or colored beads, either white or red. In the spherical vases the granular ornament was com-

¹ Perrot-Chipiez, *Hist. de l'Art*, VI, p. 436, fig. 869. Cf. the stone vases of Amorgos; Walters, *Marmor Kopf aus Amorgos* (*Athen. Mitth.* XVI, p. 53).

mon, whilst the *barbottine* was most frequent in the various jugs and decanters.

In the best examples the whole surface of the vase was covered by a polish more or less shining, which recalls the *Firniss-Farbe* of Mycenaean pottery, obtained in a first baking, which is most frequently black, tending sometimes to green, brown, or reddish.

Upon this first foundation the ornament is executed, either in fresco or in a second baking. The strongly contrasting pigments of this decoration are milky white, iron-red tending sometimes to purple, and orange. These colors have not always remained, but, having been painted on the enamelled ground, have disappeared, only leaving a few faint traces. In biological phrase, "the ontogeny recapitulates the phylogeny"; the other colors came into use later than the white and as accessories to it, a fact which I also remarked. But setting this point aside, which might cause endless discussions, I merely state that the decorative motives recognized by me in the ceramic objects of Phaestos resemble those from Camares, and are derived partly from floral, partly from textile, motives. We have stripes, simple and parallel, zigzag and crossing each other, twisted and spiral, crosslets and circlets; frequent are the dots or spots, white on a black ground, or red on cream, spread in the fields, or in concavities of the marbling, or on the tops of the beads. Besides these motives, produced by the simple application of the line and the point, and which therefore are quite distinguishable from the decoration of the Dipylon style, there are frequent motives from the vegetable kingdom, —such as lanceolated leaves or plain leaves, single or in series; rosacea or liliacea geometricized, but not in such a manner as to separate the type from the model. I recognized various examples resembling different kinds of lilies, with the petals curved towards the outside, united by a corolla marked with bright red spots, and sprigs of myrtle and garlands of similar leaves, sometimes interrupted by larger leaves, thick, isolated in the field; these are decorative motives which seem inspired

by a nasturtium or by hyacinths, or by some flowers of large plants which the potter had before his eyes. Beside the figures from the vegetable world in the pottery of Camares, Mariani and Myres found fishes and part of a little human figure with a round curly head, rising on a neck which was long out of all proportion. As to the features of the face, one eye only was represented; the hand with all five fingers is pointed toward an isolated object in the middle of the field, which Myres interprets as a shield hung up by its sling, but which to me appears rather a bowl with a handle, like those *oinochoae* which are to be seen in the engraved stones illustrated by Evans.¹

Besides these motives, there were found in the decoration of the Phaestian pottery numerous geometrical forms, such as triangles with convex sides, triple curved lines, circlelets with central points and rays, etc. And these motives, whether textile or of the organic world or geometric, are distributed with a special system in the various parts of the vase. The surface of this is in great part divided by horizontal or vertical lines into various fields filled with various decorative elements; in the smaller fields the decorative motives prevail, whereas in the larger fields the decorative elements are displayed, as Mariani remarks, not with the regularity and *horror vacui* of the Geometric style, but after the manner of the Mycenaean style. And it is singular how the ornament accompanies and accentuates all the different parts of the vase, indicating with zones and bands the neck and the body, the edge and the lip; sometimes also the various figures of little garlands and sprigs of liliacea surround and often climb over the plastic reliefs, giving a singularly graceful character to the vase.

I shall not linger here to repeat the valuable remarks made by Mariani and Myres as to the analogy between these examples of the Camares type of ceramics and those especially found in the villages dug out from under the volcanic deposits of the island of Thera,²—analogies which were also observed by me,

¹ *Op. cit.* p. 70, figs. 58, 60.

² I adopt the opinion of Mariani that the ceramic art of Thera exhibits the

also in the examples preserved in the Museum of Athens and in those of the Syllogos. Neither shall I insist upon the still more important analogies which the above-named scholars have traced with the pottery found in Egypt, in the strata attributed to Aegean settlements at Kahun, Khetaneh, and Tel-el-Yaudieh.¹ I note here only the fact that the pottery of this type does not appear confined only to the grotto of Camares, but already appears, besides the isolated examples of Dibaki, also in an important centre such as was the city of Phaestos. We can no longer positively assert that the vases found in the grotto of Camares—to the south of Ida, in the direction dominating the Messaritic plain, at the head of the great valley of Lagolio and Temeneli—were made there,—in the Mycenaean centre of Camares, as Evans would have it; for the great and varied quantity of material given by the ἐκβολάδες of the Acropolis of Phaestos is an indication that this ceramic type and style was in use if not indigenous there. The discovery of so many examples on the Acropolis of Phaestos constitutes an archaeological datum of great value for the primitive history of this Cretan centre.

At the age to which we must refer the passages of the epic in which Phaestos is recorded (*Od.* iii, 293), we see her in the decline of her importance, when she formed an extreme western part of the Gortynian dominion (ἐσχάτῃ Γόρτυνος). Here, on the contrary, she is indicated as centre of a vast enough district, embracing not only the low plain of Dibaki and the whole peninsula ending only at Cape Lithinos, but the whole sub-Idaeon region—the greater part, that is, of the actual Pyrgiotissa, which lies between the Kedrios and the southwestern slopes that descend from the tableland of Ida.

decorative types of Camares, though the former is more coarse and primitive, with less perfect forms, and is more carelessly made. It is at Camares and Phaestos that we can best observe the natural development of this art, and behold it attaining that perfection of technique and of decorative taste which is characteristic of the Mycenaean types.

¹ Flinders Petrie, *Journ. of Hell. Stud.* XI, pl. xiv, and *Illahun, Kahun, Gurob*, I, 1, 10, and what Mr. Myres says in *op. cit.* p. 6.

This region had, besides the city of the plain, a centre of the worship of the Idaean Jove in the grotto of Cameres, in the bosom of the same mountain that in its northeast flank presents us another votive cavern, the celebrated shrine of the Idaean Zeus, explored by Halbherr, the religious centre of the whole district commanded by Cnossus. Thus is explained the verse of Ovid, *Metam.* ix, 668, —

Proxima Gnossiaco nam quondam Phaestia regna,

which show that Phaëstos ought not to be treated with the contempt bestowed upon her by Hoeck.¹ They reflect instead some tradition to us unknown, which vaguely recorded the epoch when the great Cretan mountain, with two votive sanctuaries, formed the confine between the communes of Cnossus and Phaestos.

To the realm of Cnossus is attached a series of legends that have entered into the domain of art; more obscure is the fate of the *Phaestia regna* and the far-off progenitors of the poet Epimenides.² Hence of some importance seemed to me these notes about the primitive remains of the Acropolis, that tell us plainly that Phaestos was at the same time mistress of a central part of the island and a maritime city. Not in vain does Homer, in speaking of her, evoke the image of the enormous waves which dash their clouds of foam against the shining cliffs of the Phaestian shore during the short winter of that fortunate climate, while for the greater part of the year the sea gently laps the island with caressing ebb and flow, inviting the dwellers on the coasts to easy navigation. Whoever thinks of the calmness of the sea during so many months of the year, and of the regularity of the north winds, will understand how early the attraction for the sea became associated with the island's history, and how those marine traditions came in to justify the Greek proverb, — ancient, as are all other proverbs, — which said, Κρής θάλαττα.

¹ Hoeck, *Kreta*, I, p. 410.

² Hoeck, *Kreta*, III, pp. 246 ff.; Plutarch, *Solon*, c. 12.

When we think of the presence of scarabei and Egyptian motives of ceramic ornament in the necropolis of H. Onuphrios and other primitive settlements of the island, and still more when we think of the striking analogies between the pottery of the Phaestian type with that of the Kahun sherds now in the British Museum, of Tel-el-Yaudieh, of Khetaneh, and of Evans's considerations upon the origin of alphabets, we are led to establish something more than momentary and casual in the relations between the island of Minos and the land of the Pharaohs. And reflecting upon the archaeological data, which are actual proofs of that mighty Viking inroad, continuing for centuries on all the seacoasts of the Egypt of Tuthmosis III¹ and his successors, we must not forget that amongst the constituent elements thereof are mentioned the terrible *Pulasati*,² Philistines, who consolidated their dominions on the southern coast, and were, as Evans quotes, "a thorn in Egypt's side." Let us remember that the Philistines of Gaza are indicated in the Bible by the special name of Cherethites,³ in the Septuagint in Ezekiel by Κρητες,⁴ and that Gaza itself, founded, according to legend, by Minos, and therefore called Minoa,⁵ was the seat of the worship of Marnas, who is identified with Zeus Kretagenes.

Now this name of Κρητες, as that of Ἕλληνες, which in Septuagint version of Isaiah is translated "Philistines,"⁶ renders more probable the surmise of Chabas, Maspero, Evans, and others, that in the *Pulasati*, or Philistines, are to be seen the Pelasgians, the δῖοι Πελασγοί, whom we see from remote antiquity established in the island along with the Ἐπεόκρητες, Achaeans, and Dorians.⁷

And if we reflect that Mount Ida was precisely the centre of the Pelasgic domination, and partly in possession of the Phaes-

¹ Evans, *op. cit.* pp. 99, 199.

² W. Max Müller, *Asien und Europa nach altägyptischen Denkmäler*, p. 389; Maspero, *Histoire ancienne des peuples d'orient*, p. 312.

³ 1 Sam. xxx, 14. ⁵ Steph. Byz., s. *Minoa Gaza*; Hoeck, *Kreta*, II, p. 369.

⁴ c. xxv, 16.

⁶ *Is.* ix, 12.

⁷ Homer, *Od.* xix, 174; Diod. Sic. V, 80; Dionys. Halic. I, 18.

tians, who had on the heights there a sanctuary dedicated to the Pelasgic divinity, Jove, or Zeus, we shall be led to admit that among the Vikings of the sea, among the corsairs who came from the isles rising μέσφ ἐνὶ οἴνοπι πόντφ, there were also the Phaestians, who, before being taken under the rule of Cnossus, and later under the "well-fortified" Gortyna, had a very active part in all these warlike and commercial relations with Egypt, which with her fabulous wealth fascinated the mind of a grasping and imaginative people.

These are at present hypotheses not without logical foundation. It is to be hoped that the archaeological campaign, which during the present spring is being conducted in Crete, may adduce numerous facts to confirm them, revealing new and important elements of the culture of this island, which was one of the most important links between the East and the West.

ANTONIO TARAMELLI.

TURIN,
May, 1899.

CRETAN EXPEDITION

XX

A VISIT TO THE GROTTO OF CAMARES ON MOUNT IDA

IN the preceding chapter I have frequently alluded to the pottery discovered by peasants in the votive cavern or Grotto of Camares, in the southern ridge of Mount Ida, which was examined by Dr. Mariani, Mr. Myres, and Mr. A. J. Evans. But since none of the three visited the grotto,—nor any one else so far as I know up to the present time,—I think it not inopportune to describe a visit made by me in June, 1894, after having, in company with Professor Halbherr, explored the region which extends from Gortyna to the southern slopes of the mountain.

As I have intimated in the chapter upon the Acropolis of Phaestos, I came upon evident proofs, amid the remains of that city, that the primitive ceramic industry, of which the Grotto of Camares had revealed the existence, was not restricted to that point, but was common to a wide district which had Phaestos for its capital, and flourished at a period which from the remote Amorgine age extended to and attained its full development in the Mycenaean age.

Of this district the Grotto of Camares was the religious centre; hence of great interest must be the exploration of the place to discover the sources of one of the two remote phases of culture which flourished so remarkably in the island of Crete.

Two causes made difficult an accurate exploration of the

grotto when I visited the island: the conditions of personal security in this region through which numerous bandits, *φυγό-δικοι*, were then wandering; but more mighty than this obstacle, which I could easily have overcome through the assistance of the Camares mountaineers and the shepherds of Ida, — all relations and hence partizans of the bandits, — was the obstacle of the snow, which had fallen in such quantities during the preceding winter as quite to prevent Evans and Myres from reaching the grotto, and still, even June, rendered access to it very difficult.

Mine was then merely a visit, and as such I present it to my readers, in the hope that these few pages may induce some of the archaeologists now on the island to continue researches there.

I reached Camares, starting together with Professor Halbherr from Gortyna, and first traversing the hilly undulated region — in part cultivated — between the plain of Messarà and the valley in which Courtes lies, crossing the districts of Pluti, Moroni, and Courtes, then exclusively inhabited by Mohammedans. From thence by Scurvola and Gligoria, we attack the first ascents which spread out from the central mass of Ida, reaching below Temeneli, the large and deep valley which descends through Lagolio toward Dibaki, a wide valley of austere beauty, at the head of which stands Camares, situated at the crossing of two little valleys that descend steeply from the upland of Ida. From Temeneli to Camares it is all a girdling round of gorges crushed between rocky peaks, and ample shell-like hollows smiling with groves and cultivated fields; below, along the limpid and murmuring stream, the fragrant oleanders alternate with the cork trees, which are succeeded by the chestnut and beech; far above, among the heights where vegetation has completely ceased, soars the two-peaked mountain of Camares, the most southern of the Idaean chain, cut east and west by two deep valleys which unite near Camares, while toward the north it descends almost sheer down to the tableland of Nida.

This double-peaked mountain, which is distinctly seen from the whole of Messarà and from the Kato Riza, for these regions apparently represents the most salient feature of Mount Ida; since, more than any other mountain of the chain, with striking outlines it dominates the plain, hiding the true summit of Ida, which is more to the northwest, and stretches with its vast and ponderous ridge, at least 500 m. higher, to dominate the districts of Axos and Eleutherna.

At the foot of this mountain is Camares, a dirty and miserable village, like all the mountain villages, and not free from leprosy. It is composed of thirty or forty houses inhabited by coaldealers and woodcutters of the mountains, shepherds and peasants,—all, or mostly, Christians,—of proud and independent temper, and disposed to resist the injustice of a hated and despised rule. Many of them possessed vases and fragments of pottery found in the surrounding Mycenaean necropolis, for the most part of later style.

I also examined the Mycenaean necropolis, which came to light in the treasure-hunt pursued by the peasants, to the southwest of the village; it occupies the summit of a hill at the meeting of two valleys, in a locality well adapted for a Mycenaean settlement, and cut at its eastern limit by the deep furrow of the valley which skirts it. The field of the necropolis is called *τῆς καϋμένης σόπατου*, and is the property of a poor leper called Constantinos Protogeraki.

I explored four tombs already ransacked by the peasants and stripped of all the material they contained. As is given in the accompanying plan (Fig. 1), they are at about 25 m. from the extreme eastern limit of this field. They are excavated in the ground and buried, and are in the form of small *tholos*, common to so many tombs of the Mycenaean type in the island of Crete and in the Aegean world.

According to the peasants, the tombs were seven; but of the four I was able to examine, three were situated on a single line near each other, and equally oriented, with the aperture toward the east, and at little depth below the surface. A fourth was

slightly northwest of the others, but with the same orientation of the three near tombs. One, the most southern, was 2 m. in diameter by 1.60 m. in height; the central was 2.40 m. in diameter by 1.80 m. high; the northern, 2 m. by 1.60 m. All were constructed with bits of calcareous stone, regularly splintered so as to fit into each other, without any mortar or clasping metal rings, and making a beehive-like dome. The

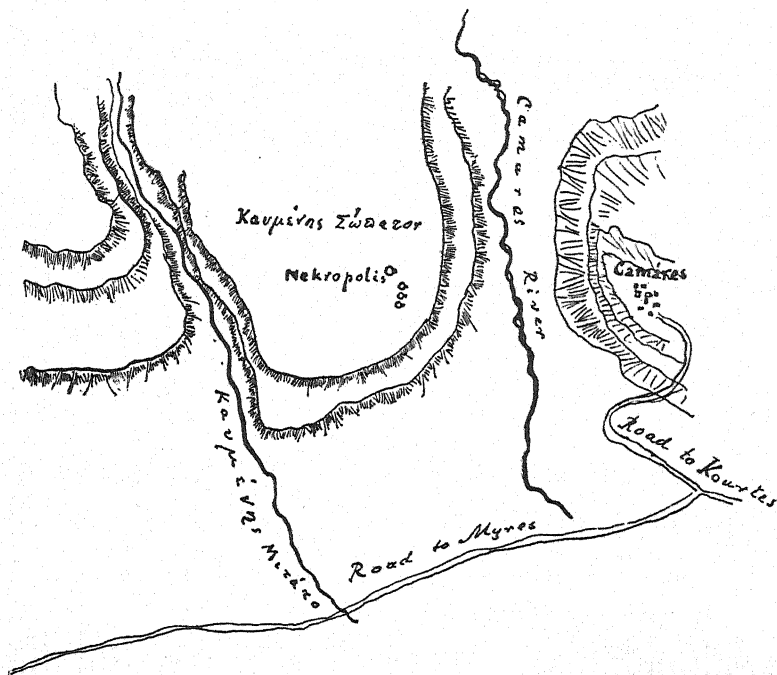


FIGURE 1.—CAMARES AND VICINITY.

profile, in spite of the long interval of centuries, had been perfectly maintained. The three tombs had small doors on the east side about 0.50 m. high and 0.45 m. wide, giving into a *dromos* of the visible length of, say, a metre, covered, as well as the door, with stones.

Perhaps here, as I suppose was also the case in the tombs of Courtes, there was first excavated a well for the *tholos* and the *dromos* large enough to build them in the open air. When

they were completed they were entirely covered up with earth, and on occasion of interments this was removed above the

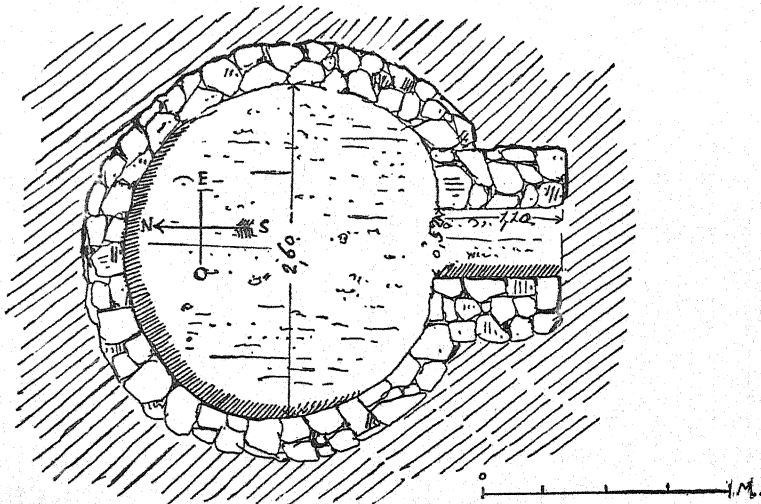
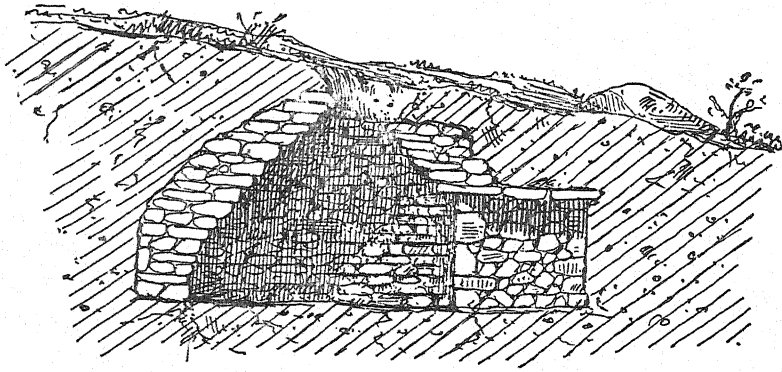


FIGURE 2.—THOLOS TOMB NEAR CAMARES.

dromos, at a spot marked by a *stèle* or some kind of *σῆμα*, and burial was made.

Furthermore, what Perrot and others suppose took place for the large *tholos* of the Mycenaean type, is the same as would

happen for the Neolithic and Eneolithic *tumuli* with a sepulchral chamber; these must have had something more than a casual relation to or coincidence with the Mycenaean *tholos*.¹

The other tomb, situated more to the north, with the same type of *tholos*, is 2.20 m. in diameter by 2 m. in height. The *dromos* is longer, 1.40 m., but is, like the others, closed by a rough wall.

Although the peasants, with the extravagance too common to the Cretan country-folk, related wonders about the treasures discovered in the tombs, their dimensions and appearance indicated poor families, which, from the utensils shown me, must have belonged to the extreme decadence of Mycenaean culture. The tombs had been rifled of their grave-chattels, but in all the four I found remains of the bones of their occupants. In the most northern I saw traces of the bones of the pelvis; in the central *tholos* of the three southern, where they said seven skeletons had been found, all laid with head toward the west and feet to the east, I found still in their places the tibias of two different persons, one apparently a boy, the other a man of tall stature. In the different tombs I found some broken pieces of yellowish pottery, covered with interwoven red lines and a shapeless fragment of bronze.

I do not know whether a fine bronze axe with semicircular double edge belongs to the necropolis or to the votive grotto. It has a round hole in the middle and repeats the type indicated by Montelius as classic of the Greek Bronze Age, and met with at Mycenae, Tiryns, and in the Troad.² It was offered me by a relative of the proprietor of the ground, Constantinos Protogeraki, and purchased by me for the Museum of Candia, whither it went to keep company with other very fine examples from the cave of Scotinò in Pediada, from Arvi near Hierapetra, and from other localities of the island.

¹ Perrot, *op. cit.* p. 54.

² Tsountas, *Μυκῆναι*, p. 161; Perrot, *op. cit.* VI, p. 842; Schliemann, *Tiryns*, fig. 100; Chantre, *L'âge de pierre et du bronze en Troade et en Grèce (Materiaux pour l'hist. de l'homme, IX, p. 36, pl. iii, 4).*

The few tombs visited by me are the remains of a necropolis ascribable to a modest centre of population which existed up to the end of the Mycenaean culture. They maintain the normal type of the subterranean tombs, which we find here of a much reduced size, not so much from the degeneration of the type, as some suppose, but in correspondence with the modest needs of the constructors of the burying-place, whose social condition cannot have been very different from that of the present inhabitants of Camares.¹ It is an interesting fact that in the depths of this great valley, under the heights of Ida, in a place not easy of access, slightly fertile, and exposed to the heavy winter snows, a rather numerous group of families should be found existing: it is a sign which, along with many others noted by Mariani, Halbherr, Evans, and myself, clearly shows that the population of the Mycenaean period was diffused not only in the plains and along the coasts of Crete, but all over the country, even in the most remote and inaccessible mountain valleys, where it subsisted apparently by pasture or the cutting down of the woods, which in early times, as Pliny and Theophrastus attest,² thickly clothed the hills to a much greater height than at present, — perhaps under more favorable conditions of climate.

Nor can the idea be excluded that the situation of Camares, at the foot of the mountain in which the grotto lies, was not in some relation with the sanctuary, if for no other reason than as a halting-place for the devotees continually resorting thither from the Phaestian plain and from the valleys of Courtes, Zarò, etc. And such a fatiguing climb, of at least four hours, was for the pilgrims a sort of propitiation of the divinity, for

¹ I have to note here that I came upon other traces of a Mycenaean settlement slightly to the west of the necropolis, situated near the spacious valley called *καυμένης μύδρο*: these consisted especially of pieces of large *pithoi* of terra-cotta, mostly coarse, internally grayish-red, ornamented with parallel stripes scratched; there were also fragments of pyxides, of *oinochoae*, and of so-called *Bügelkannen*, scattered over the surface of the field.

² Plin. *Hist. Nat.* XVI, 26; Theophrast. *Hist. Plant.* 3, 5. See also *Etymol. Magn.* s. *Ἀρκέριον*.

they gained the height with no slight difficulty, and were purified in a bath of deliciously pure and balsamic air.

The side of the mountain ascends in enormous gradations of calcareous rock steeply toward the two-headed summit; and the tortuous path winds close to the precipices clothed with asphodel and fragrant salvias; here and there, where they can obtain standing-ground, larches and pine trees permeate the air with their resinous, healthful odors, while on every side spring forth purest fountains whose margins are crowned with flowers. As we ascend higher and higher, below our feet spread the great deep valleys, dark with woods, of Gligoria and Temeneli; opposite loom the huge and sterile masses of Kandanos and Kedrios; farther off, beyond the plain of Messarà, the mountains of the Kato Riza are veiled in violet; and still farther again we behold the azure, calm, infinite sea, set with the solitary Paximadia island, and the distant Gaudos, which gleams in it like a white sail.

To those who ascend from the sun-baked plain of Messarà, the invigorating coolness of those hills, with their lively suggestions of the Italian Alps, offer an indescribable refreshment and a stimulus to prosecute the ascent. The thousand metres being passed, the plants become more rare, only a few pines or firs erect themselves here and there amid the broom and the thyme, which clothe the masses of rock and fling their perfumes on the summer air.

Of an impressive solemnity is the locality where the grotto, — called by the mountaineers Maurospilion, — opens, with a background of peaked rocks, lightning-scathed and lashed by the furious hurricanes which rage against the western summit of Mount Camares. The grotto yawns like the enormous jaw of a monster, in the steep flank of the mountain, so that there is but a narrow shelf of standing-ground in front; this is much encumbered with masses of rock fallen from the upper heights, or rolled down from the sides of the hill, so as to fill up the space where the votive altar stood in ancient times.

As may be seen from the subjoined sketch, which is based on

a photograph of mine (Fig. 3), the mouth of the Grotto of Camares is a rude natural arch from 18 to 20 m. high. At the base the entrance is 42 m. wide, while the terrace in front, as well as we could ascertain through the rocks and boulders encumbering it, may have a width of 50 m., and a projection in front of the cavern of, at the most, 30 m. The interior of the grotto (Fig. 4) is also blocked with stones rolling down immediately above the entrance; but it has a very strong incline downward, which was still filled with snow, as it were a deep well, and which, according to my guide, never altogether melts.

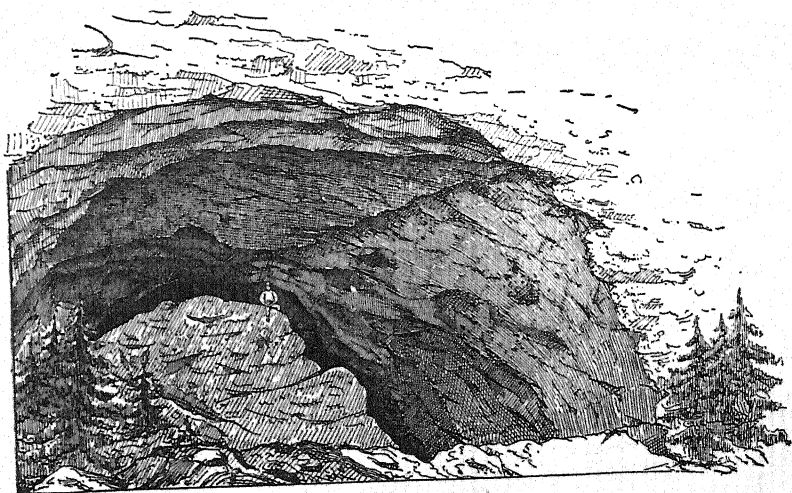


FIGURE 3.—ENTRANCE TO THE GROTTO OF CAMARES.

If one considers the aspect of the place in such an elevated region, and that the grotto is more than anything else a deep well in the mountain side, one might suppose that the votive altar, with the archaeological deposit, should be sought for near the mouth, under the fallen masses. Still, following the assertions of my guide, I descended to the bottom of the first part of the cave, to the depth of 50 m., but fully lighted from the ample mouth. Here a small channel about 1 m. in width leads down to the lower depths of the cave. Crawling upon all fours with my men, I presently found myself in a kind of gallery,

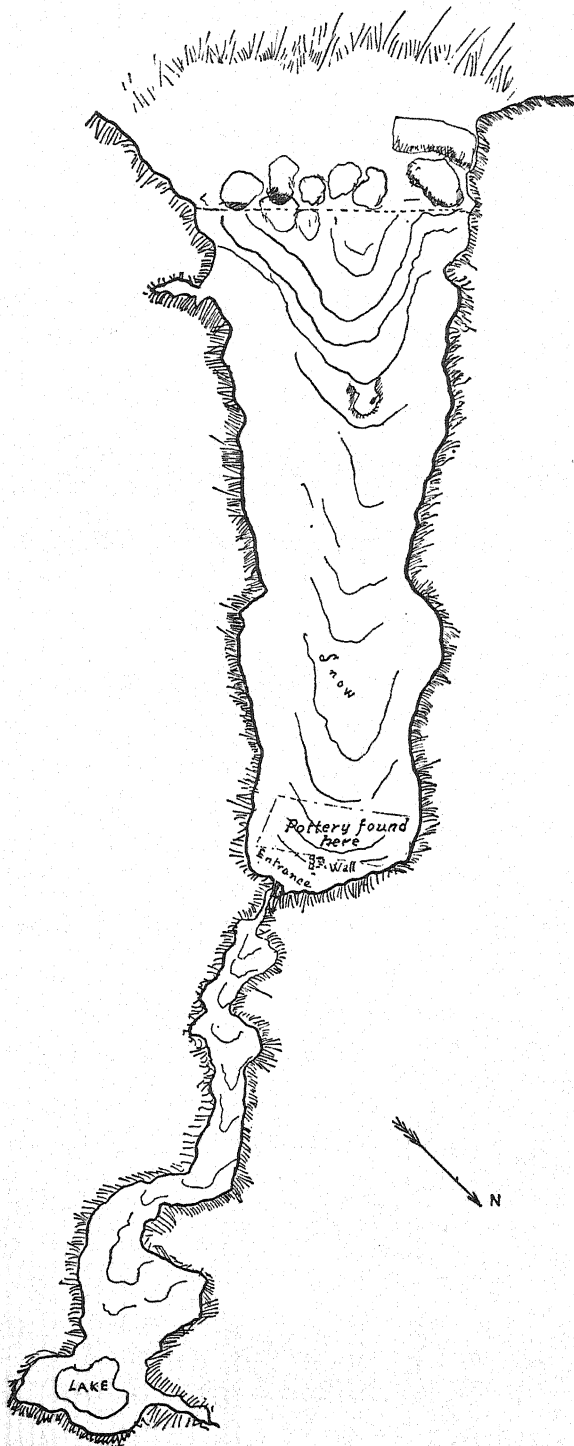


FIGURE 4. — THE GROTTA OF CAMARES: GROUND PLAN.

through which I descended, with the aid of resinous torches. It continued, always with an inclination downward, and with a height of from 10 to 12 m., until it reached a kind of hall encrusted with stalactites, at the bottom of which, in a bed of gravel, was a little lake of purest water. Amongst the objects littering the gallery, where the temperature is extremely cold, we came upon bones of animals, goats and *agrimi* and the skull of an ox; in the mud I found various fragments of pottery

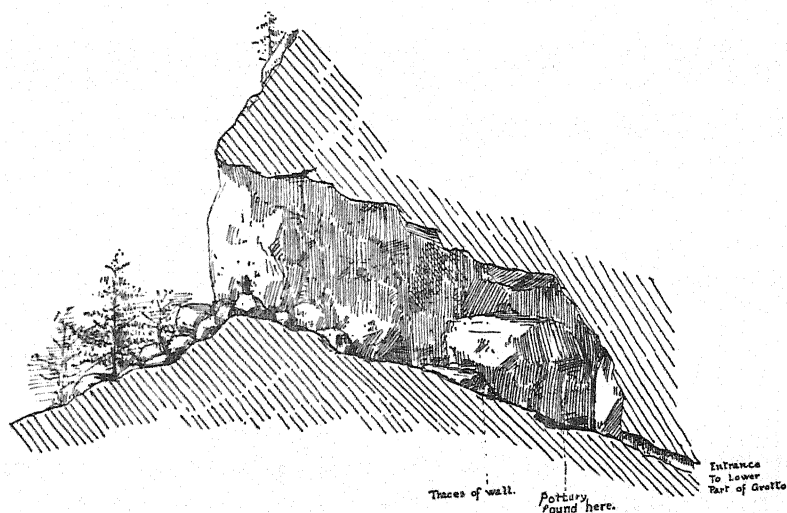


FIGURE 5.—ENTRANCE TO THE GROTTO OF CAMARES: SECTION.

encrusted with the calcareous elements of the water. Amongst others I found a decanter-shaped vase, quite entire, with triangular mouth, narrow neck, and wide body. The surface was slightly encrusted, but the charming ornament was quite visible, in brown zones, directing themselves toward the round base of the vase; the form was identical with those of the Amorgine type, found in the deposit at H. Onuphrios.¹

Besides these there were other broken bits of pottery, probably swept into this subterranean gallery by the rain-water and

¹ Evans, *The H. Onuphrios Deposit* (*Cret. Pictographs*, p. 114, fig. 106, a, b).

melted snow : this was the only way to account for their presence in such a place.

Reascending into the upper portion of the grotto, which is, as I said before, in full light, and having a warmer temperature, I examined the narrow ridge of ground which remained clear of the thick mass of snow that filled the depth of the cave. It was just here that my companions asserted they had found the vases offered to Dr. Hatzidaki, which are now in the Museum of the Syllogos of Candia, and there in fact I could obtain the proofs that for once, at least, those Cretans had not lied.

Clearing away some of the black mud produced by the droppings from the outer snow, there appeared distinct traces of mason-work composed of rude calcareous blocks, rudely fashioned into squares and arranged one against the other without any mortar : these blocks bore evident traces of having served as a hearth. I excavated for a space 5 m. wide and 2 m. in length in the midst of the black mud and earth, already turned up by the spades of the mountaineers in search of treasure, and I was able to find a certain quantity of ceramic fragments which represented, alas ! the whole of my archaeological booty. This household pottery belonged to the various types characteristic of the successive stages of culture evolved in the island.

(a) Utensils roughly modelled in clay mixed with gravel, wrought by hand, baked at an open fire without trace of superficial ornament either plastic or painted, except some waved zone or band of zigzag scratched in the unbaked clay with a pointed stick.

(b) Vessels, also rude, modelled by hand, such as coarse winejars (vases with spouts and round bottoms); other vases with the surface painted yellowish or cream-color, with painted ornaments in zones and bands of Amorgine type.

(c) Other earthenware vessels in very fine clay of thin consistency and well baked, with a kind of blackish enamel tending to green, or even red, upon which were leaf and floral ornaments, fans, — even animal elements of the *fauna marina*, such as horse-fish and star-fish, of doubtful color, and almost wholly destroyed by damp. Along with these painted specimens were also objects in the plastic style, such as little knots or globules, forming the characteristics observed in this class of pottery by Evans, Mariani, and Myres.

(d) Some pottery fragments of the classic Mycenaean type, of fine clay, marked by the wheel and well baked, the surface covered with a polished enamel of a yellow or red ground, upon which, also in enamel, were polished brown or white or black bands with leaves, ribbons, circlets, and stars, and other ornamental motives usually found in Mycenaean pottery.

The similarity in the type of the Camares pottery, with its earthy colors, violet, white, red, orange, standing out in such strong contrast with the black enamel of the ground, and the more primitive so-called Therean, seems to support the assertion of Evans,¹ who, after examining the collection existing in the Museum of Candia, had arrived at the conclusion "that the ceramic class here represented, though of archaic aspect, may slightly overlap the more purely Mycenaean pottery in the island."

It is possible to base another observation upon the material hitherto excavated in the grotto, and that is, in it we have a place of worship which seems much more ancient than that of the Idaean cave in the northern limb of the same chain. Whilst the antiquities found there by Halbherr ascend from the Hellenic age to the period immediately post-Mycenaean, that is to say, to the beginning of the first millennium before our era, the Grotto of Camares, on the other hand, offers the traces of a worship of a much more ancient epoch, the epoch in fact to which the tombs of Phaestos and H. Onuphrios bear testimony, as also the deposits of Arvi, the stratum of sepulture in the grotto of Miamû, and so many other sporadic discoveries at Praesos, Goulàs, and other places in Crete.

Whoever next explores the Grotto of Camares ought to undertake the removal of that enormous mass of snow, the accumulation possibly of centuries, and search for a stratum of ground still undisturbed; he will perhaps be so fortunate as not only to discover objects of chronological importance, but also the regular succession of archaeological strata. Certainly this huge cavern, with the enormous yawning jaws which give it an aspect so hideous, plunging down into the abysses of the

¹ Evans, *op. cit.* p. 81.

sacred mountain, must have appeared — like the Idaean cave, like the cave of Psychró — as a vestibule to the infernal regions. From thence emanated the spirit of the divinity; thence issued the voice of the god who spoke in the hurricane and lived amid the thunderbolts and the winter storms, or smiled upon the world in the ineffably serene dawns of the Hellenic spring.

When the soul of the Greeks was in a lively creative ferment of myths and legends, of divinities and cults; when the divine idea had not yet been rent and divided into the subtle and manifold divisions of names and types, such as we find them in the Homeric or post-Homeric age, — it must have been the god of light, thunder, and, at the same time, tempest and infernal darkness, who was venerated on this mountain, — Mount Ida, — where the two caves of Nida, on the upland, and this of Camares, yawn dark and mysterious.¹ Hence, in this case, the worship of the god in the cavern was not, as Diodorus Siculus remarks, a simple remembrance of the Troglodyte phase of Cretan culture; but is to be considered as an attempt at propitiating the divinity who, from the summit of the mountain, dominated the whole of his island. And such a divinity, who had his shrine in deep abysmal caverns, it was very natural to surround with a character of *χθόνιος δαίμων*; and such, in fact, he is revealed in the narrative of Pythagoras's and Epimenides's legendary ascent to the Idaean cavern, which may very well have been this of Camares. The poets ascended the mountain and made the propitiatory sacrifices to Zeus, wrapped in black robes,² and otherwise following the ritual imposed in the worship of the divinity.³

Not for nothing was the mighty mountain which dominates

¹ Besides these two principal caverns, I visited another one, much smaller, on the same mountain; and it is the *Voidospillon*, a grotto a few metres in dimensions, opening on the south flank of the Mount Camares, at little distance from the great shrine; in it I found nothing to suggest that it had been either inhabited or held sacred.

² Diog. Laert. VIII, 3.

³ Porphyry. *Pyth.* 17; Euseb. *Praep. Evang.* IV, 9, 145: *Εἰς δὲ τὸ Ἰδαίων καλούμενον ἄντρον καταβὰς, ἔρια ἔχων μελάντα τὰς νενομισμένας τριττὰς ἑννέα ἡμέρας ἐκεῖ διέτριψε.*

Crete with its compact mass — which from afar presents itself to the navigators of the Aegean Sea — called the throne of Zeus, the centre of his worship;¹ not for nothing were the Cretans distinguished by the title “Sons of Ida,”² since the principal families of the race inhabiting the heart of the island have their sanctuary and place of worship in the flanks of the mountain.

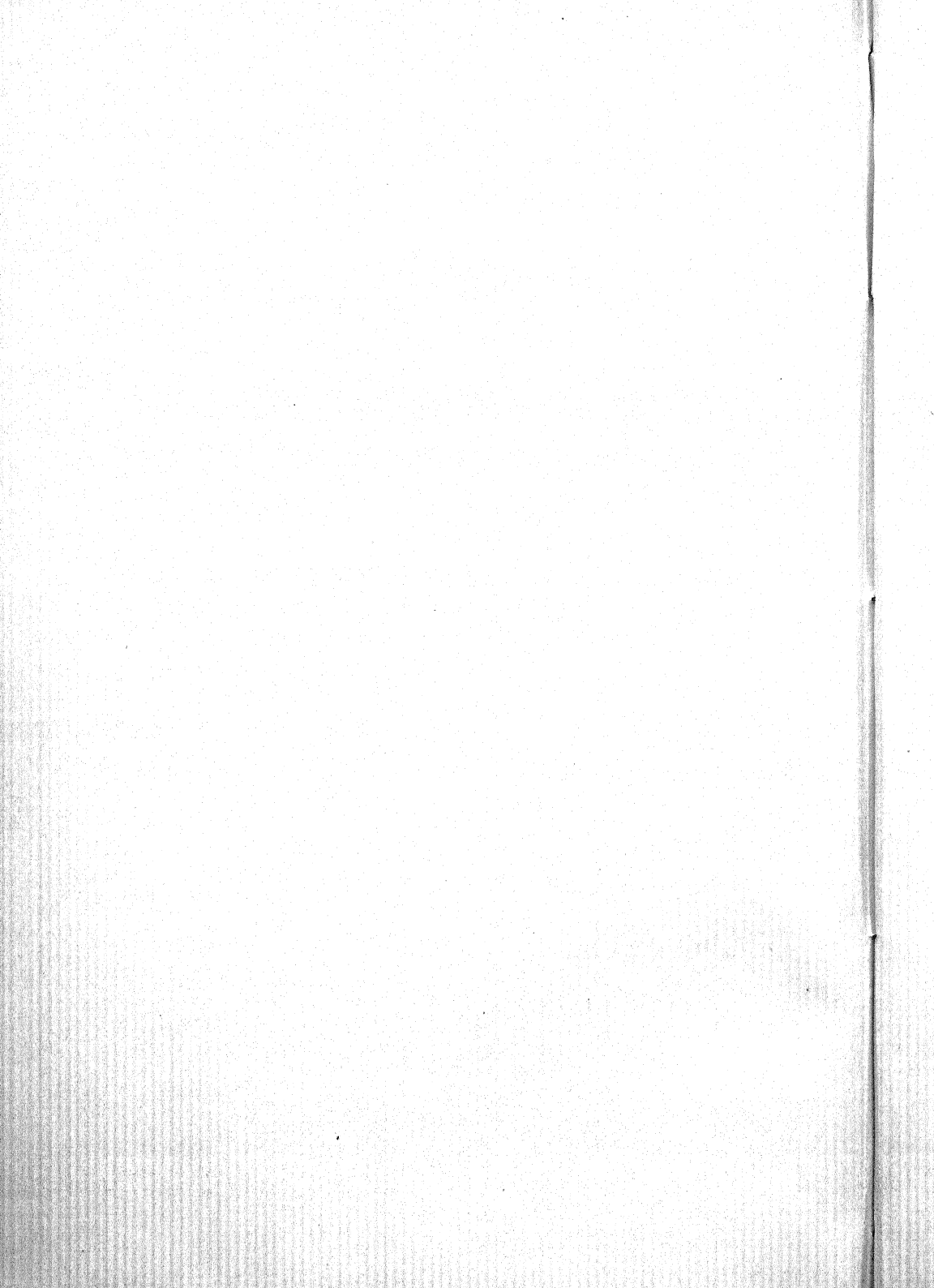
Whilst the inhabitants of Cnossus, the Axians, and the Eleuthernaeanes went on pilgrimages to the other Idaean cave, upon the northeast flank of Ida, near the tableland now called Nida, the natives of Gortyna, the Phythians, and the people of “Phaestia regna” climbed the steep ascent to the *Μαυροσπήλαιον* of Camares, chanting hymns of praise and invocations to the supreme Pelasgic divinity, the supreme Zeus, sometimes the terrible “earth-shaker,” sometimes the placidly-smiling (*μειλικίος*) upon his devoted children.

ANTONIO TARAMELLI.

TURIN, 1899.

¹ Plat. *Legg.* I, 1.

² Aristoph. *Ranae*, 1356: ‘Αλλ’, ὦ Κρήτες, Ἰδᾶς τέκνα, τὰ τόξα λαβόντες ἐπαμύνατε.



ARCHAEOLOGICAL DISCUSSIONS¹

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN RECENT PERIODICALS

GENERAL AND MISCELLANEOUS

The Representation of the Gallop in Art. — In *R. Arch.* XXXVIII, 1901, pp. 26-45 (24 figs.) and 224-244 (2 pls.; 31 figs.), S. Reinach continues his treatise on the representation of the gallop. (See *Am. J. Arch.* 1900, p. 521, 1901, p. 225.) Gold plaques and the like from Siberia show the *galop volant*, in which the forelegs are extended forward and the hind legs backward. This motive was found in Mycenaean art. From this it probably spread by means of colonies on the Black Sea to Siberia. The same motive is found in Sassanide and Chinese art, both of which probably derived it from Siberian (Scythian) art. Japanese art received it from China.

The Evolution of Decorative Motives. — In the *Am. Architect*, 1901, pp. 29-32, 51-53, Professor Hamlin completes his series of articles on the 'Evolution of Decorative Motives' by treating of the Rinceau or foliated scroll motive. He shows how this motive persists under varying forms in the art of Europe and of Asia from the fourth century B.C. to the present day.

Ancient Places and Names of Places. — In *R. Arch.* XXXVIII, 1901, pp. 94-124, Victor Bérard continues his study of ancient "topology and toponomy." (See *Am. J. Arch.* 1901, p. 226.) Several instances of Semitic names in Greek are brought forward. The subtitle of this instalment is 'The Phoenicians and the Odyssey,' and the greater part of the discussion consists of an elaborate comparison between the activity of the ancient Phoenicians in the eastern Mediterranean and that of the Franks in the same region. The article is continued *ibid.* pp. 213-223.

History of the Bilingual Inscription C.I.S. I, 122. — In *C. R. Acad. Insc.* 1901, pp. 17-35, Héron de Villefosse publishes an account of the history of the bilingual inscription from Malta in the Louvre, correcting previous statements.

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor FOWLER, Editor-in-charge, assisted by Miss MARY H. BUCKINGHAM, Professor HARRY E. BURTON, Professor JAMES C. EGBERT, JR., Professor ELMER T. MERRILL, Dr. GEORGE N. OLCOTT, Professor JAMES M. PATON, and the Editors, especially Professor MARQUAND.

No attempt is made to include in the present number of the JOURNAL material published after June 30, 1901.

For an explanation of the abbreviations, see pp. 123, 124.

Parthian Coinage.—Students of Parthian history will be interested in a paper 'On the Rearrangement of Parthian Coinage,' by Mr. Warwick Wroth of the British Museum, in *Num. Chron.* 1900, pp. 181-202.

Ancient Bronze-casting.—At the February meeting of the Berl. Arch. Gesellsch., L. Lewin discussed ancient bronze-casting, speaking of the mixture of the metal,—an art declining in the time of Pliny,—the *cire-perdue* and the sand or clay mould processes, the repairing of defects, the practice of casting statues in separate pieces, and the various methods of joining them. The Benin bronzes from West Africa, made by the *cire-perdue* process, he thinks cannot be the work of the negroes. This last view was combated by v. Luschan. (*Arch. Anz.* 1901, pp. 15-16.)

The Oxo-Caspian Trade Route.—The question of an ancient water connection between the Aral and the Caspian, the origin of the Greek belief in it, and the nature of the traffic *via* the Oxus, are discussed by W. W. Tarn in *J.H.S.* XXI, 1901, pp. 11-29; map.

The Monument at Adam-Klissi.—In the volume recording the proceedings of the *Congrès archéologique de France LXV^e session*, held at Bourges in 1898 (published in 1900), G. Tocilescu (pp. 305-311) maintains that the monument at Adam-Klissi was erected by Trajan. Four slabs of inscription found near the trophy read *memoriam fortis[simorum]* and *pro rep. morte occubuerunt*. Another fragment reads *tri]b(unicia) pot(estate)*. The whole inscription is restored:

Imperator Caesar divi Nervae filius Nerva Traianus | Augustus Germanicus Dacicus tribunicia potestate XIII consul V pater patriae | in honorem et memoriam fortissimorum virorum | qui pugnantes pro republica morte occubuerunt bello Dacico. In the list of soldiers which follows, the soldiers of each legion are from various countries, which was not the case after Trajan, and the *gentilicia* fail to show the names of later emperors. A large tumulus near the trophy and mausoleum was probably a military work, perhaps an outlook tower. The town, *Civitas Tropaeensium*, has been explored and in part excavated. Three gates and some well-preserved walls have been found, and within the walls are remains of many buildings, among them three basilicas, one of Byzantine times, one earlier, and one of the time of Trajan. This was 56 m. long and 23 m. wide, and was divided by two rows of eighteen columns.

Ancient Battlefields.—At the December meeting of the Berl. Arch. Gesellsch., Kromayer gave a clear account of the Battle of Sellasia (the defeat of Cleomenes by Antigonos in 221 B.C.), based on detailed study of the ground and on Polybius's narrative, which has hitherto been considered inexplicable. He called attention to the great importance of such topographical study, both for the proper understanding of critical events in ancient history, and for a true appreciation of the writers who describe them. (*Arch. Anz.* 1900, pp. 204-211; 2 plans.)

The Battle of Dionysus and the Indians in Ivory Carvings.—In *Jh. Oesterr. Arch. I.* IV, 1901, pp. 126-142 (3 pls.; 7 figs.), Hans Graeven discusses representations of the conflict of Dionysus and his followers with the Indians, found in ivory carvings at Vienna, St. Gall, Florence, Cologne, and Paris. The carvings are rude, but the groups are well composed. Indian weapons and costumes are represented with great realism. The reliefs are probably derived from some Hellenistic original, which was itself inspired

by a Hellenistic poem describing the deeds of Dionysus in India. Passages in Lucian's *Dionysus* agree with the representations of the reliefs.

The Rosalia at Philippi.—In *B.C.H.* XXIV, 1900, pp. 299–323, pl. xiii., P. Perdrizet discusses the *rosalia* in the East. This Italian feast in honor of the dead was held in May, when offerings, especially roses, were brought to the dead, and at the funeral banquet the feasters were crowned with roses. The Italian custom can be traced in Asia Minor, where Romans had settled, and in the Danube provinces, and is especially common at Philippi. Seven inscriptions, of which five are in Latin, are given and discussed at length, with many illustrations from unpublished inscriptions. Perdrizet finds no connection between the Thracian worship of Dionysus and the *rosalia*. The latter are Italian and brought to Philippi by the colonists of Augustus. Our inscriptions are almost all of the second century after Christ. The dead were honored, not only by the *escae rosales* in the spring, but also on the day of their birth or death, in other words by the Italian *parentalia*. An inscription now at Salonica is published which mentions the *rosalia*, and also two Thiasi of Dionysus, called Prinophori and Dryophori, names which show the importance of trees in the Dionysiac cults of Macedonia.

Mohammedan Art in India.—Under the title 'L'Islam monumental dans l'Inde au Nord,' in the *Gaz. B.-A.* 1901, pp. 277–291, Robert d'Humières begins a survey of Mohammedan art in northern India. The present article treats of the monuments of old Delhi.

Baghdad during the Abbasid Caliphate.—A book of some archaeological interest is *Baghdad under the Abbasid Caliphate*, by G. Le Strange (Oxford, 1900, Clarendon Press, xxxi, 381 pp.; 8 plans). The foundation of the city and its history under the Abbasid Caliphate are narrated, and its streets, roads, canals, mosques, palaces, markets, gates, tombs, and other buildings are described from contemporary Arabic and Persian sources, and the statements of these sources are verified, when possible, by those of later writers. The plans of mediaeval Baghdad are, to a certain extent, tentative, but appear to be in the main correct.

EGYPT

The Date of the Monuments at Hieraconpolis.—In *C. R. Acad. Insc.* 1900, pp. 695–696, G. Foucart fixes the dates and attribution of the royal monuments discovered in 1898 at Hieraconpolis by means of the inscriptions. The name of one king he reads *Qab-Bouhi*; that of the other *Boutaou*. The last king of the first dynasty is, according to the lists of Abydos, Turin, and Saqqarah, *Qabouhi*; the list of Abydos places *Boutaou* immediately after *Qabouhi*. *Boutaou* has been identified with the *Boethos*, whom Manetho places first in the second dynasty. These results show the historical value of the lists and enhance the importance of these monuments of Hieraconpolis as the earliest dated Egyptian monuments. The processes leading to these results are explained in *C. R. Acad. Insc.* 1901, pp. 228–252, where Foucart discusses the objects represented by the signs denoting the names of the two kings, and shows that they were pronounced Qobouh and Boudja (Qobhou and Boudjaou). As these kings are, respectively, the last of the first dynasty and the first of the second, it is unnecessary to assume a dynasty earlier than Menes. A more elaborate paper is to follow.

Manetho's Trustworthiness.—In *Biblia*, XIII, 1901, pp. 390-395, Orlando P. Schmidt discusses Egyptian chronology, with special reference to Borchardt's article in the *Ägypt. Zeit.* referred to by F. Ll. Griffith in the *Archaeol. Report* of the Egyptian Exploration Fund for 1899-1900, p. 22. Schmidt finds that Manetho is absolutely trustworthy (though his work has been tampered with by later writers). He also rejects the theory of a new "dynastic race" from the East, and declares that the Egyptians were from the beginning of one and the same race.

BABYLONIA

A Babylonian Inscription.—In *Biblia*, XIII, 1901, pp. 402-405, a letter to the *Times* by W. St. Chad Boscawen is printed, in which he calls attention to the importance of a Babylonian inscription found by de Morgan at Susa. It is dated about 4500 B.C., and records the purchase of land by "Manishtuirba, King of the city of Kish." The careful survey of the land, the calculation of the value of its produce, and the stipulations as to payments, etc., all show the high organization of society.

The Dream of Gudea.—In *C. R. Acad. Insc.* 1901, pp. 112-128, F. Thureau-Dangin gives a translation of part of the inscription on the large cylinder A from Tello, now in the Louvre (cf. *Z. Assyr.* III, pp. 232-235). The part translated contains a record of a dream of Gudea, in which Bel urges Nin-girsu to cause a temple to be built at Shirpurla. Gudea prepares to build a temple, but does not know to whom, nor on what plan, to build it. Through Nin-girsu and the goddess Gatumdug he appeals to the goddess Nina, from whom he learns that the temple is to be dedicated to Nin-girsu. Nina also gives advice about making a chariot. Nin-girsu prescribes the plan of the temple and the manner of its construction. The rest of the inscription describes the building of the temple.

A Dedication to Ghimil-Sin.—In *C. R. Acad. Insc.* 1901, pp. 256-257, is a publication of a translation by F. Thureau-Dangin of an inscription from Tello, dating from about the twenty-fifth century B.C. It records the dedication by Arad-Nannar, patesi of Shirpurla, of a temple to Ghimil-Sin, one of the most powerful of the kings of lower Babylonia. Such dedications to living kings are unusual.

SYRIA AND PHOENICIA

An Archaeological Journey near Damascus.—In a book entitled *Voyage archéologique au Sefâ et dans le Djebel ed-Drûz* (Paris, 1901, Leroux, 224 pp.; map; 17 pls. 12 figs. 8vo.), R. Dussaud and F. Macler give an account of an archaeological trip in the regions near Damascus, chiefly to the southeast. They publish 412 Sâfaite inscriptions; almost all mere signatures, e.g. "by 'Abd son of Nadam." The grandfather's name is often added. A list of names is appended. From the Djebel ed-Drûz 104 inscriptions are published. Most of them are Greek of late date, but a few are Nabataean, and still fewer Latin.

An Anthropoid Sarcophagus in Venice.—In the *Atti del Reale Istituto Veneto di Scienze, Lettere, ed Arte*, LIX, 1899-1900, ii, pp. 505-517 (3 pls.), Angelo Scrinzi publishes and discusses a fragment of the lid of an anthropoid sarcophagus in the palazzo Boldù (formerly Bembo) in Venice. The head and bust of a woman are preserved. The work shows Ionic-Greek

influence, though the type was originally Egyptian and the hair reminds us of Assyrian work. Probably the sarcophagus is Cypriote work of the sixth century B.C.

The Triad of Heliopolis.—In *C. R. Acad. Insc.* 1901, pp. 191 f., P. Perdrizet restores the inscription *C. R. Acad. Insc.* 1900, p. 255, to read, lines 1, 2: *I(ovi) O(ptimo) M(aximo) H(eliopolitano), Veneri, Mercurio*; lines 4-5: *Ex[responso] divi M(egrin) B(almarcodis)*. Jupiter, Mercury, and Venus were the sacred triad of Heliopolis. *Ibid.* pp. 218-221, Perdrizet explains the relief on the soffit of the "temple of the sun" at Baalbek, an eagle holding in his talons a caduceus and in his beak a garland, the ends of which are carried by two putti. The eagle represents Jupiter, the caduceus Mercury, the putti the morning and evening star, both of which are really the same, Venus. The whole is a symbolic representation of the three great deities of Heliopolis. Their Semitic names are unknown.

Contributions to the Knowledge of the Syrian Steppe.—In the *Z. D. Pal. V.* XXIII, 1900, pp. 97-158, Martin Hartmann completes his 'contributions to the knowledge of the Syrian steppe' by publishing a number of late inscriptions (most of which were already known), addenda, and an index of names of places.

ASIA MINOR

Gargara and the Altar of the Idaean Zeus.—In *Jh. Oesterr. Arch. I.* IV, 1901, pp. 111-125 (4 figs.), W. Judeich describes a great rock-hewn altar on the Adatepe, north of the Scala of Tschibne, some fifteen miles east of Assos. The ancient Gargara he finds, by examination of ancient texts and comparison with the actual topography, to have been situated in the neighborhood of Tschibne. The early settlement lay inland, probably on the part of the Dikeli Dagħ called Odjak Kaya, where are remains of an early settlement. A description of these remains by E. Fabricius is given. The rock-hewn altar is probably that of Zeus. The other sites proposed for Gargara are discussed.

On the Sculptures and Inscriptions of Antioch.—In *Jh. Arch. I.* XVI, 1901, pp. 39-55 (8 figs.), R. Foerster discusses certain of the objects found at Antioch, presenting arguments and parallels to prove that the group of wrestlers is of Egyptian origin, and the crest upon the head of Hermes, a lotos leaf; that the statue of an orator does not represent Julian, and that a rock inscription ascribed to Trajan is a late boundary mark.

The German Excavations at Priene.—In the *Century*, May, 1901, pp. 103-114, A. L. Frothingham, Jr., gives an illustrated account of the excavations at Priene conducted for the Berlin Museum, introduced by a sketch of the history of the city.

Mysian Reliefs.—At the Institut de Correspondance Hellénique, January 25, 1899, P. Perdrizet described five Mysian reliefs with inscriptions in the British Museum, Athens, and Triglia in Mysia, and reached the conclusion that they were dedicated in the same sanctuary by a thiasus which worshipped Apollo, Artemis, and Cybele, but was especially devoted to the cult of the Θεός Ὑψίστος and called itself ἡ τοῦ Διὸς συναγωγή. The monuments belonged to a Megarian colony of the Propontis, probably the ancient Bayllium, on the site of the modern Triglia. They are probably dated by the Bithynian era, and belong in the years 119, 121, and 123 B.C. To the

same period and place, if not to the same thiasus, belongs the relief in the British Museum discussed by Conze in *Athen. Mitth.* XVI, 1891, p. 191. Mysia is particularly rich in native reliefs, and their collection and arrangement are much to be desired. (*B.C.H.* XXIII, 1899, pp. 592-599; pls. iv, v.)

The Bilingual Inscription from Dorylaeum.—In *Athen. Mitth.* XXV, 1900, pp. 445-446, P. Kretschmer publishes notes to the Phrygian text of the inscription *Athen. Mitth.* XXIII, 1898, p. 362. Lines 6 ff. should read:

Ἐνσταρνα- | σ? | δουμθ κε. Οιονθ | βαν ἀδδακετ ορου | αν.

The last words probably correspond to the close of the Greek text Ταῦθ' ὁ πατήρ Ἀσκληπιός, and ἀδδακετ to a missing verb.

GREECE

ARCHITECTURE

The Origin and Development of the Greek Temple.—In the *Gaz. B.-A.* 1901, pp. 188-202 (6 figs.), Henri Lechat begins a series of articles on the Greek temple. He finds that it developed from the "Mycenaean" *megaron*. The façade was first added for adornment; this suggested the peristyle; and finally the opisthodomus was added that the building might be symmetrical. In a second article (*ibid.* pp. 336-349; 8 figs.) the change from wood and crude brick to stone is treated. The introduction of stone columns brings with it the diminution from the bottom upward instead of the previous inverse diminution. Triglyphs and metopes, mutules and guttae, are survivals from the period of wooden beams. The triglyphs along the sides of the building did not exist when wood was used, as at that time there was no peristyle, but were adopted to make the adornment of the sides agree with that of the façades. The "Mycenaean" *megaron* had a flat roof, but sloping roofs of wood must always have existed, and when tiles were invented the sloping roof and gable ends were naturally adopted for temples.

The Greek Temples of Sicily and Southern Italy.—At the November meeting of the Berl. Arch. Gesellsch., B. Graef reviewed *Die griechischen Tempel Siciliens und Unteritaliens*, by Koldewey and Puchstein, which describes forty temples, besides altars and other buildings, and analyzes the results in a most important supplementary chapter. The authors note the existence of a distinct Achæo-Doric style, trace the transition from early irregular Doric to the fixed canon, distinguish colonial development from that in the home country, date the Heraeum at Olympia at about 700 B.C., disprove, apparently, the connection of Doric with Mycenaean architecture as well as its origin in wood structure, and trace the Ionic style back to Mycenaean plant-motives through the so-called Aeolic capital. (*Arch. Anz.* 1900, pp. 200-203.)

The Old Temple of Athena on the Acropolis not Restored.—In *Harvard Studies in Classical Philology*, XII, 1901, pp. 319-326, W. N. Bates shows that the old temple of Athena on the Acropolis was not restored. The Greeks took an oath not to restore temples injured by the Persians (Demosth. in *Leocr.* 81; Pausan. X, 35, 2-3; Diod. Sic. XI, 29, 1-4). This was revoked about 450 (cf. Plutarch, *Pericles*, Chap. XVII). The Parthenon was then built to take the place of the old temple, which had not been restored. Examples of other temples which were never restored and of

temples rebuilt about 450 B.C. or later are given. The arguments against the existence of the oath are refuted.

The Gymnasium at Delphi.—At the Institut de Correspondance Hellénique, January 11, 1899, Th. Homolle described The Gymnasium at Delphi. It lay (Paus. X, 8, 6-9) near the late church of the *Κοίμησις τῆς Παναγίας*. It is mentioned in a number of inscriptions, of which the earliest is the accounts of the *ταμῖαι* in the archonship of Caphis (331 B.C.), and the most important the accounts connected with the celebration of the Pythian games in 258 B.C., under the archon Dion II. The accounts include work on the gymnasium, stadium, and hippodrome. The *ἐυστός*, *περίστυλος*, *παραδρομῖς*, *σφαιριστήριον*, *ἀποδυτήριον*, and *ὄχετός* are mentioned. It seems that the gymnasium and palaestra were in existence at the end of the fourth century, and that they were used for the training of the native youth and for the accommodation of the athletes who took part in the games. The entire lack of ephebic inscriptions and Delphian dedications seems to show that the natives paid little attention to gymnastic training. Excavations in 1898 between the Arachova road and the ravine of Castalia brought to light foundations on two terraces. On the upper terrace nearest the road was a portico, about 180 m. long by 7 m. deep, with a row of Ionic columns in front. At the front of the colonnade, away from the modern road, was a conduit, and 6.50 m. distant a small trench, thus forming an open space equal in length to the portico. We have here the covered *ἐυστός*, the open *παραδρομῖς* (the *ὑπαιθρον* of Pausanias), and the *ὄχετός* which brought the water from Castalia. On the lower terrace was the palaestra, containing a court (13.85 m.), surrounded by several porticoes, from which on two sides chambers opened. To the north of the palaestra proper is a pentagonal area, containing along the east side eleven waterspouts, and in the centre a large basin, 10 m. in diameter and 1.80 m. deep. To the north of these cold baths, a Roman bath was later erected. The building seems to have been altered and repaired in Roman times, but without essential alterations of the plan of the fourth century. (*B.C.H.* XXIII, 1899, pp. 560-583; pl. xiii.)

The Stadium at Delphi.—At the Institut de Correspondance Hellénique, February 22, 1899, Th. Homolle spoke on The Stadium at Delphi. The situation, indicated by Pausanias (X. 32, 1) as in the highest part of Delphi, has always been known, but the stadium was gradually filled with earth washed down the mountain, and this mass finally destroyed the south side, while the north remained almost intact. The stadium was nearly a rectangle 177.55 m. long, from *ἄφesis* to *τέρμα*, and 25.25 m. and 25.65 m. wide at the extremities, but 28.50 m. at the centre. The start and finish were marked by slabs of stone cut as at Olympia and Epidaurus. At the west end was a semicircular *σφειδόνη*; at the east, the semicircular platform was occupied by a large gate or triumphal arch, of very poor workmanship, erected in Roman times. On the north side were twelve rows of stone seats for spectators, at the west and south only six. There were thirteen stairways on the north and south sides, and five in the *σφειδόνη*. In the centre of the north side is a bench 7 m. long and 1.50 m. deep, evidently the place of honor. In its present form the stadium is the work of Herodes Atticus, but the supporting wall bears one of the oldest inscriptions of Delphi, containing a reference to the sanctuary of Eudromos, and making it

certain that the Delphic stadium was established in this place in the fifth century. Pindar's language shows that in his time the stadium was at Cirrha as well as the hippodrome. The change to Delphi probably took place during the Phocian hegemony (458-421 B.C.). The length of the stadium does not accord exactly with the Roman foot, but indicates that the Delphic stadium was based on a foot very near the Roman foot of 0.296 m. (*B.C.H.* XXIII, 1899, pp. 601-615; pl. xiii; 3 cuts.)

The Greek Stage. — At the February meeting of the Berl. Arch. Gesellschaft, B. Graef reviewed O. Puchstein's book, *Die griechische Bühne, eine architectonische Untersuchung*. The author considers the podium above the proscenium as a real stage, and according to its form distinguishes three types of theatre: (1) with podium extending around the ends of the scene-building, Priene, etc.; (2) with podium reached by inclined approaches, Epidaurus, etc.; (3) with wooden stage erected between large projecting towers. In the third class he puts the first stone building of the Dionysiac theatre, as well as the first period of the theatre at Eretria, and places them both in the fifth century. To the second class he refers the second, which he calls the Lycinian period of the Dionysiac theatre and the second period at Eretria. His views of pinaces, parascenia, rolling-tracks, etc., are opposed to those of Dörpfeld. (*Arch. Anz.* 1901, 1, pp. 12-15.)

The Supposed Hellenistic Stage. — In replying to E. Bethe's recent article on the Greek stage (*Jb. Arch. I.* XV, 1900, pp. 59 ff.; see *Am. J. Arch.* IV, 1900, p. 525), W. Dörpfeld welcomes the admission that the dithyramb and the fifth century drama were performed in the orchestra, and overthrows all the proofs of an elevated stage in the fourth and third centuries. The scene on the Assteas vase, in particular, he reminds us, is of a class especially excluded from Greek theatrical representation. (*Jb. Arch. I.* XVI, 1901, pp. 22-37; 1 cut.)

SCULPTURE

Sketch of Greek and Roman Sculpture. — In *Progress* (Chicago), VI, No. 4, January, 1901, pp. 235-275 (32 illustrations), Edmund von Mach publishes a brief history of Greek and Roman sculpture.

The Lead Idol in Athens. — In *Athen. Mith.* XXV, 1900, pp. 339-340, P. Wolters shows that the lead idol in the National Museum at Athens was bought by Finlay at Ios, and is identical with the lead image whose genuineness was doubted by Ross. Cf. *Athen. Mith.* XXIII, 1898, p. 462.

Glaucus of Chios. — In *Jb. Arch. I.* XVI, 1901, pp. 62-68 (1 fig.), E. Pernice argues that the *σδηρόν κόλλησις* invented by Glaucus of Chios was the welding of two heated surfaces, and not any kind of soldering, that being a process already known for some metals in the Mycenaean age.

The Mask of Artemis with Two Expressions. — In *R. Ét. Gr.* 1901, pp. 1-7, M. Collignon discusses Pliny, *N.H.* XXXVI, 12, where a mask of Artemis by Bupalis and Athenis is said to exist at Chios, which appears to have a sad expression to those who enter, a joyous one to those who go out. The remark is derived from the *ciceroni*, not from any learned source. The explanation is sought in the fact that in several works of early Ionic art the corners of the mouth turn up, thus giving the appearance of a smile, but the cheeks project so that the corners of the mouth are hidden if the face is seen from the side. The lips of these works are so full that, when the corners of the mouth are hidden, the mouth appears to be pouting.

The Eleusinian Goddesses. — In a book entitled *Die Eleusinischen Göttinnen. Entwicklung ihrer Typen in der attischen Plastik* (Strassburg, 1901, K. J. Trübner, 108 pp.; 3 pls. containing 9 figs.; 3 figs. in the text. 4to.), Max Ruhland discusses the types of Demeter and Cora in Attic sculpture. In the fifth century a type of Demeter represented by statues in Berlin and Charchel and the great Eleusinian relief is found to be slightly earlier than the Athena Parthenos; a type represented by the Demeter of the Capitol (Helbig, *Führer*, I, 503) is ascribed to Alcámenes, another type to Praxiteles the elder, to whom, however, no known type of Cora can as yet be ascribed. A type of seated draped Demeter belongs also to the fifth century. In the fourth century, types of Demeter with a veil, Cora with a mantle, and Demeter with a mantle are distinguished. A group of Demeter on a cista, with Cora standing, is discussed, as is also the work of Damophon at Lycosura. The latter, ascribed to the second century B.C., had little apparent influence upon the types of the goddesses. The book contains much careful discussion of detail.

The Caryatides of the Treasury of Cnidians. — At the Institut de Correspondance Hellénique, March 8, 1899, Th. Homolle discussed The Caryatides of the Treasury of Cnidus, one of which has been completely restored by uniting the scattered fragments and supplying in simple fashion the missing parts. The figure belongs to the last half of the sixth century B.C. Eleven fragments show that there were originally two of these figures, symmetrically placed, each with a *polus* on the head, on which rested a capital. They were therefore architectural, and as the fragments were found near the treasury of Cnidus, as the style of the reliefs on the *polus* agrees well with that of the Gigantomachia of the treasury, and as the proportions are correct, there can be no doubt that they formed the columns of the front of the building. The necessary effect of solidity is obtained by the firm pose, while the employment of the pedestal and the high *polus* make needless a colossal figure, which would be out of proportion to the rest of the building. The figure is taken directly from a well-known Ionian type in sculpture, and the earliest caryatides known, the Horae and Charites on the Amyclaeian throne, were the work of an Ionian, Bathycles of Magnesia. The Vitruvian story of the origin of the type has long since been discredited. Caryatides come from the hydrophori and canephori of the cults by the substitution of one weight for another. The type is used early for the supports of mirrors, vases, seats, and thrones, and its development is traceable through early Greek art. It does not seem to come from Chaldaea or Assyria, but may have been derived from Egypt. The *polus* is Oriental; it is worn by divinities of Asia Minor, as Artemis, Aphrodite, Cybele, and Demeter, and their priestesses. The calathus also belongs to the cult of Demeter, and in this figure the *polus* and capital together form a calathus. Demeter is the special goddess of Cnidus, and also honored at Delphi, hence the choice of this type by the Cnidians seems natural. The word *κρυάτις* appears in the terminology of art in the fourth century to denote dancing girls, seemingly in somewhat violent motion. It denotes also the dance of the Laconian girls at Caryae in honor of Artemis. The caryatides, like the calathophori, have a religious origin, and seem to be distinguished by the gesture of the raised hand, with which they sustain the burden on their heads. The two types have been confused in the language of the later

writers. During the fifth and fourth centuries the name for these companions or worshippers of a divinity was simply *κόραι*, maidens. (*B.C.H.* XXIII, 1899, pp. 617-635; pl. vi-viii; 2 cuts.)

The Birth of Athena.—In the *R. Ét. Gr.* 1901, pp. 127-137 (1 pl.), S. Reinach publishes a somewhat fragmentary marble relief from Kadi-Keui, the ancient Chalcedon, now in the imperial museum at Constantinople. Zeus is represented between two goddesses, the Ilithyiae, just before the birth of Athena. This is the first known relief representing this scene, and belongs to the latter part of the sixth century B.C., as is shown by its style and the letters of the fragmentary inscription. The vases representing this scene—the moment before the birth—are exclusively black-figured. The birth of Athena is not represented in Corinthian vase-paintings nor in the Ionic series of hydriae from Caere. Two vases with the birth of Athena have inscriptions which may be Megarian, though the vases themselves appear to be Attic. Megarian vase-painters might work at Athens, and put on Attic vases a scene well known at Megara. Chalcedon was a Megarian colony. At Megara there was a temple of the Ilithyiae, the walls of which were doubtless decorated with votive reliefs representing the birth of Athena. From these reliefs the vase-painters and the maker of this relief derived their motives. A Megarian influence in Greek art of the sixth century is thus seen to have existed.

A Statue of a Youth at Athens.—In *Athen. Mitth.* XXV, 1900, pp. 373-391 (pls. xv, xvi), R. Delbrück publishes and discusses the statue No. 692 of the Acropolis Museum, a nearly life-size figure of a youth, of fine Parian marble. The measurements of the head correspond very closely to those of the Piombino Apollo. The head certainly belongs with the torso to which it was joined in 1900. The statue is a work of Samo-Naxian art about half a century later than the statues from Ptoos and Megara. A careful comparison with the Ptoan figure (*B.C.H.* X, 1886, pl. iv) shows the Samian elements in the later work. It is the earliest figure showing a somewhat free movement; the left leg is advanced and slightly bent at the knee, and the head is turned slightly to the left. Other works are discussed in comparison, and the type is traced through later works to the Olympian pediments. The type is probably Parian. The relations of Samian art to the rest of Ionia are not clear; but if the Piombino Apollo can be called Samian, the Ptoan statue may well represent the contemporary Chian school. Samian art reaches Attica only after the younger Parian style has developed, which succeeds a period of Chian influence, and lasts until the time of Polygnotus. The man with the calf shows the earlier stage of Attic art, and the pediment sculptures of the temple of Athena show the modifications due to Chian influence. At the end of the sixth century the Parian influence is seen in a torso now in Athens, seemingly representing a youth striking down an enemy. Later in this series belongs the torso from Daphni (*Am. J. Arch.* IX; pl. xi). The Acropolis statue cannot well be earlier than 520 B.C.

The Group of Harmodius and Aristogiton.—In *Röm. Mitth.* 1900, pp. 219-222, B. Sauer discusses details of the group of Harmodius and Aristogiton, with reference to a reconstruction.

Two Terra-cottas.—Two terra-cottas are published by R. Wuensch in *Röm. Mitth.* 1900, pp. 211-218 (3 figs.). One is an archaic female head from

the acropolis of Acrae in Sicily; the other a standing youth, probably from Boeotia, and probably the votive offering of an ephebus to Apollo.

New Replicas of the Head of the Athena Parthenos.—In *Jh. Oesterr. Arch.* I. IV, 1901, pp. 144–150 (1 pl.; 5 figs.), Ludwig Pollak publishes a marble head in the Glyptothek Ny Carlsberg at Copenhagen, a marble head in his own possession, a small marble head in the National Museum at Athens, and a glass-paste seal in the Berlin Museum. The Ny Carlsberg head has lost the tip of the nose, the sphinx on the helmet, most of the two-winged horses, and almost all the further adornment. In style it is, however, nearer what that of Phidias probably was than any other extant replica. The seal also shows more characteristics of the art of the fifth century B.C. than do most other copies of the Parthenos. The two other heads are of less importance. The Ny Carlsberg head resembles that of the Ares in the court of the palazzo Borghese. The Ares is therefore from the studio of Phidias. Two further replicas, on ornaments in the possession of the Russian ambassador to the Quirinal, A. J. Nelidow, are to be published elsewhere. A full list of replicas or copies of the Parthenos is given.

The Washing of the Feet of Odysseus.—In *Athen. Mitth.* XXV, 1900, pp. 325–338 (pl. xiv; 1 cut), C. Robert publishes (1) a marble relief from Gomphoi in Thessaly, now in Athens, which shows the scene between Eurycleia and Odysseus in close dependence on the Odyssey. Penelope is standing at the loom, with her back to the other group, apparently unravelling the web. Composition and style of the relief mark it as Thessalian, and of the last part of the fifth century. (2) Somewhat earlier is a “Melian” relief in Athens, of which only the left half is preserved, containing the seated Odysseus, the head of Eurycleia, and a youthful figure, probably Telemachus, in the background. Probably Eumaeus was represented behind Telemachus, while Penelope seems to have been omitted. The presence of Telemachus and Eumaeus is not due to a literary source, but to the desire of the early artist to represent all the important persons of a story. The relief shows a certain resemblance to the Olympian sculptures, and confirms Furtwängler's view that the “Melian” reliefs belong to the Ionic art of the islands.

The Diomedes of Cresilas.—Brunn's interpretation of a statue in Munich as Diomed carrying off the Palladium is confirmed by a marble hand found in Rome, which must come from a similar original. It is a left hand grasping the base of a long-robed statuette. (P. HARTWIG, *Jb. Arch.* I. XVI, 1901, pp. 56–61; 5 cuts.)

The Argive Hera of Polyclitus.—A marble head in the British Museum, with half-short hair and a broad hair-band, which has been called a Bacchus, so closely resembles the head on Argive coins of the latter part of the fifth century that there can be no doubt it is, like the coins, copied from the gold and ivory statue of Hera made by Polyclitus for the Argive Heraeum, about 420 B.C. In addition to the familiar Doryphorus and Diadumenus, the metope heads, and even the sculptured anthemion ornament found in the American excavations, give a basis for comparison of style, and show an interestingly close connection between the statue and the sculptures of the temple. The head, with the same distinction of technique between hair and face, seems to be reproduced also in a terra-cotta fragment from the excavations. The form of the crown on some of the coins suggests that the

Seasons and Graces with which it was adorned were free-standing figures above the circlet. (C. WALDSTEIN, *J.H.S.* XXI, 1901, pp. 30-44; 2 pls.; 3 figs.)

Pliny, Pausanias, and the Hermes of Praxiteles.—In the *Transactions of the American Philological Association*, XXXI, 1900, pp. 37-45, H. N. Fowler discusses the testimony of Pliny and Pausanias with special reference to an article by Miss Sellers in the *Gaz. B.-A.* 1897, pp. 119-139. He tries to show that Pliny, *N.H.* XXXIV, 87, does not refer to the Hermes found at Olympia, and that even if he did his testimony is not to be preferred to that of Pausanias unless its source is known.

The Ex-voto of Daochos.—In *B.C.H.* XXIII, 1899, pp. 421-485 (pls. ix, x, xi, xii, xxiv, xxv, xxvi; 2 cuts), Th. Homolle publishes the statues of the bases already described in *B.C.H.* XXI, 1897, p. 598; *Am. J. Arch.* III, 1899, p. 292. Starting from Preuner's discovery that a similar group, the work of Lysippus, once stood in Pharsalus, Homolle discusses the whole question. He finds that the original monument consisted of seven figures, and that the figure of Sisyphus II at the left, which is some 40 cm. taller than the others, and the missing and uninscribed figure at the right were added later; the latter last of all, and possibly representing a stranger. Preuner's inscription only proves that the statue of Agias at Pharsalus was by Lysippus. It is probable, however, that his brothers were commemorated with him. Such a group to three victors nearly a century after their successes can be due only to Daochos. The conclusion is reached that Daochos erected two groups of seven figures, one of bronze at Pharsalus, the other in marble at Delphi; that the marble figures were probably copies of the bronzes; that the statue of Agias and probably those of his brothers, Telemachus and Agelaus, were by Lysippus, and possibly the rest of the group also, though it may have been divided among two or more authors. A careful analysis of the sculptures from Delphi leads to the conclusion that the sculptor of the Agias can be found only in the school of Lysippus; that the other nude statues, including Sisyphus II, show such close resemblance to the Agias that their origin must be sought in the same school; that the draped statues may well be of the same school, but the resemblances are not so close as to preclude the hand of an Attic follower of Praxiteles or Scopas. Lysippus borrowed something from Praxiteles and more from Scopas, and in all his innovations kept something from Polyclitus; and therefore the school of Sicyon is connected with the two great preceding schools of Argos and Athens. The inscription of Pharsalus shows that in the Agias at least we have an authentic contemporary copy of a work of Lysippus. The story that Lysippus was self-taught is seen to be greatly exaggerated. He is not independent of the past, but he is above all a faithful pupil of nature. The story of the influence of Eupompus has a basis of truth in the influence of painting on the sculpture of the fourth century in the school of Sicyon. The famous passage "*volgoque dicebat ab illis (veteribus) factos quales essent homines, a se quales viderentur esse*" is to be interpreted much in the sense proposed by Brunn, that Lysippus endeavored to secure a natural effect by representing things as they appeared to the eye, rather than with the mathematical accuracy of a Polyclitus.

An Attic Relief at Constantinople.—At the Institut de Correspondance Hellénique, on March 8, 1899, G. Leure described a Funerary Bas-Relief

of Attic style in the Museum of Tchinery-Kiosk. The relief is a fragment in the style of the Attic reliefs of the fourth century B.C., and probably came from the Thracian coast. It shows a little maid holding a toilet-box for her mistress, who evidently was represented standing in the portion of the relief now lost. It belongs, therefore, with *Attische Grabreliefs* 871 and 875, and is to be interpreted as a combination of the toilet and departure scenes. (*B.C.H.* XXIII, 1899, pp. 615-617; 1 cut.)

The Recently Discovered Greek Bronzes.—In the *Monthly Review*, June, 1901, pp. 110-127 (5 pls.; 5 figs.), Charles Waldstein publishes a popular discussion of recently discovered Greek bronzes. The bronze youth from Anticythera (Cerigo) he ascribes to Praxiteles or his school, and interprets conjecturally as Hermes the Orator or the Comforter. The crouching marble youth from the same place is regarded as Hellenistic, perhaps Pergamene or Rhodian, and interpreted as fighting, with raised shield on the left arm and sword or spear in the right hand, against an enemy on horseback. The drawing made for the Marquis de Nointel of the metope No. XI of the south side of the Parthenon is cited in comparison. The bronze youth found in November, 1900, at Pompeii (see Figs. 1 and 2), is connected by Waldstein with Pasiteles and regarded as a "precursor of the statue by Stephanos." The bronze charioteer from Delphi is hesitatingly ascribed to Calamis. This figure and the bronze "Hermes" from Anticythera are spoken of as the finest extant Greek bronzes, if not even the finest specimens of Greek sculpture of any kind. The article contains many remarks on the rarity of genuine Greek works, and the reasons therefor, as well as on the styles and motives of the works discussed. In the *Gaz. B.-A.* 1901, pp. 295-301 (4 figs.), Th. Reinach ascribes the bronze youth from Anticythera to some sculptor of the fourth century B.C. who was influenced by Polyclitus, possibly the youthful Praxiteles or Euphranor. He interprets the figure as a youth holding a ball, bird, or other rotund object, perhaps playing with a dog which would be at his left side. *Ibid.* pp. 302-304 (pl.; fig.), S. di Giacomo publishes the bronze from Pompeii, which he regards as a copy of a work of an Attic artist a little earlier than Phidias, who was inspired by the masterpieces of the artists of Argos. The discoveries at Anticythera are described by P. Cavvadias in *Arch. Anz.* 1901, pp. 17-19 (4 figs.), *J.H.S.* 1901, pp. 205-208 (5 figs.), *R. Ét. Gr.* 1901, pp. 122-126 (5 figs.), and *C. R. Acad. Insc.* 1901, pp. 58-63 (3 figs.) and 158-159 (3 pls.). Besides the sculptures, Cavvadias mentions the remains of a ship, an anchor, and sailors' utensils.

The Barberini Faun.—In *Jb. Arch. I.* XVI, 1901, pp. 1-18 (8 cuts), H. Bulle reviews briefly the history of the Barberini Faun, and following out indications of the original parts, suggests changes in the restoration, chiefly the extending of the right leg, which bring out its resemblance to the bronze Sleeping Faun from Herculaneum, and which conform more nearly to ancient ideas.

A Votive Relief to Mên.—In *B.C.H.* XXIII, 1899, p. 389 (pl. i), T. H. publishes a very curious relief from the British Museum in honor of Mên, of careful workmanship, and uniting a great variety of the attributes and emblems of this Asiatic divinity. The discussion of the relief by Cecil Smith is to appear later.

The Aphrodite of Melos.—In *Chron. d. Arts*, February 9, 1901, S. Reinach discusses the dedicatory inscription of the niche in which the

Aphrodite of Melos was found. This cannot be restored as Furtwängler (*Masterpieces*, p. 377) proposes (cf. *I. G. Ins.* III, No. 1091), and there is no reason to connect it with the statue. The term with the head of the

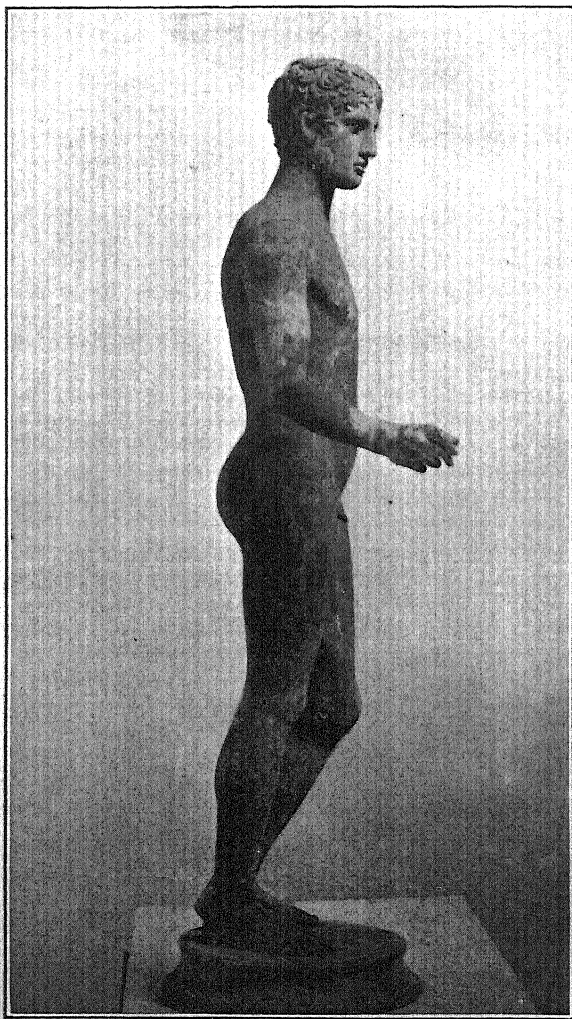


FIGURE 1.—BRONZE YOUTH DISCOVERED AT POMPEII, NOVEMBER, 1900.

bearded Hermes found with the Aphrodite has the inscription of Theodoridas in letters of the fourth century, while the inscription of the niche belongs to about 200 B.C. The inscription of '... sandros from Antioch on the Maeander' belongs to the term with the head of the youthful Heracles.

This cannot have belonged with the Aphrodite, but was probably grouped with some other statue. In *Hermes*, 1901, pp. 305-308, F. Hiller v. Gartringen enumerates the objects found with the Aphrodite, cites C. Robert's opinion that the artist's signature belongs to the Aphrodite, and publishes two parts of the Thespian inscription *C.I.G.G.S.* I, 1761 (*B.C.H.* IX, 1885, p. 409, 21): *ανδρος Μην* | *α(?)νδρου* (lines 1, 2), and . . . *ξανδος Μην* | *Μαιανδρο*. (lines 11, 12),

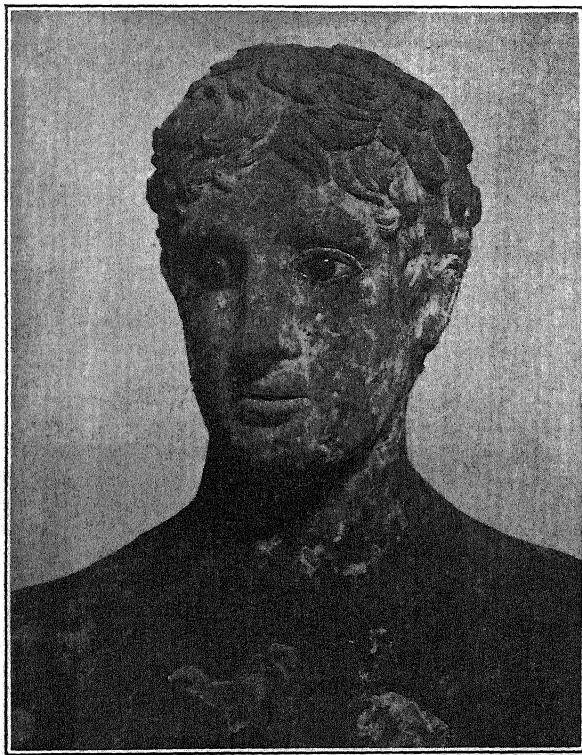


FIGURE 2. — HEAD OF THE BRONZE YOUTH DISCOVERED AT POMPEII,
NOVEMBER, 1900.

in which the same man appears as a poet about 100 B.C. It is not strange that an artist should be also a poet.

The Discovery of the Poseidon of Melos. — In *Chron. d. Arts*, May 4, 1901, S. Reinach gives, with some comments, the report sent by Charles Tissot, minister of France at Athens from 1876 to 1880, to the Minister of Foreign Affairs. With the Poseidon were found in 1878 an equestrian statue, two statues of draped women, and one of a draped man, in addition to the base with the inscription of Theodoridas. The equestrian statue has disappeared. The others are Nos. 235-238 in the National Museum at Athens.

The Hecate of Menestratus.—In *R. Arch.* XXXVIII, 1901, pp. 82-93, S. Reinach discusses Pliny, *N.H.* XXXVI. 32 (Vol. V, p. 110, Jan.). *In magna admiratione est Hercules Menestrati et Hecate Ephesi in templo Dianae post aedem, in cuius contemplatione admonent aeditui parcere oculis, tanta mar-moris radiatio est.* Cf. Strabo, XIV, p. 641. The statue was probably in the temple. The expression about the marble comes from a misunderstanding of the Greek word *μαρμαίρειν*. The statue was so perfect that the goddess seemed to be present in person, in all her divine radiance. To look at the goddess in person was of course dangerous for human eyes.

Reliefs in the British Museum.—At the Institut de Correspondance Hellénique, January 11, 1899, P. Perdrizet discussed unpublished Greek reliefs in the British Museum. 1. Sepulchral relief of the third century from Smyrna with the inscription *Νουμήνιος Σεύθο[υ] Ανοσιμαχείς*. 2. The lower part of a grave relief from Mycenae, a work of the fourth century; cf. Smith, *Catalogue of Sculpture*, I, 641. 3. Fragment of a votive relief from Rhodes. The two divinities represented have been called Serapis and Isis, but are rather two Greek gods, as Zeus and Hera, or Asclepius and Hygieia. 4. A fragment from Ephesus, interpreted by Smith, *Catalogue*, I, 754, as sepulchral. It is rather a votive relief to a divinity represented as mounted and armed with the double axe. It is very probable that it is the Amazon Ephesus, *ἡ πρώτη Ἀρτεμιν ἐτίμησε καὶ ὀνόμασεν Ἐφεσίαν*. (*B.C.H.* XXIII, 1899, pp. 558-560; pl. iii; 2 cuts.)

The Greek Originals of Figures on the Basis from Sorrento.—In *Röm. Mith.* 1900, pp. 198-210 (2 figs.), W. Amelung discusses the reliefs of the Sorrentine basis (see *Röm. Mith.* 1889, pl. x). The figures of Apollo, Artemis, and Leto represent the three statues of the Palatine Apollo-temple, the work respectively of Scopas, Timotheus, and the younger Cephisodotus. This is the first authentic copy of a work of Scopas. The writer is led to this conclusion chiefly by a new interpretation of Propert. III. 31, 5 f. On another side of the basis, the figure of Mars Ultor is a representation of the statue in the temple of the Forum of Augustus,—a statue from a Greek original, contemporary with the acrolithic statue of Mars at Halicarnassus. At the left of Mars is the Genius of Augustus; at the right, a figure of Venus has been lost.

VASES

Primitive Painted Pottery in Crete.—The pre-Mycenaean pottery of Crete, first known at Camares, has been found in great quantities in the lower town of Cnossus and in a few examples in the Dictaeon Cave. These finds are classified, described, and illustrated by D. G. Hogarth and F. B. Welch in *J.H.S.* XXI, 1901, pp. 78-99; 31 figs. The ware shows the same patterns as the earlier dark incised pottery, but is quite distinct from Mycenaean, both in the stiff conventionality of the ornament and in its technique, the chief peculiarities of which are a body-glaze, plastic ornament, and imitation of metal work.

Pandora.—A new Pandora vase, a red-figured crater of the middle of the fifth century, recently presented to the Ashmolean Museum, is published by P. Gardner in *J.H.S.* XXI, 1901, pp. 1-9; pl. Pandora dressed as a bride, rising out of the earth, and Epimetheus with a hammer in his hand, carry the story back of Hesiod to the primitive earth-worshipping stratum of population in Greece.

Argos, Io, and the Prometheus of Aeschylus. — In *Harvard Studies in Classical Philology*, XII, 1901, pp. 335–345 (pl.), J. C. Hoppin publishes a red-figured Attic hydria in his possession. The date is not later than 470 B.C., probably between 480 and 470. Hermes with a sword is pursuing Argos, beside whom runs Io in the form of a heifer. Zeus, Hera, and a priestess are present. The Heraeum is indicated by a column and an altar, the sacred grove by bushes. Other representations of the myth are catalogued. In the nineteenth ode of Bacchylides and in the *Supplices* of Aeschylus, Io appears, as on this vase, in the form of a heifer. Other vases show the same form as late as 475 B.C. In the *Prometheus* of Aeschylus, Io is a horned maiden, and in this form she appears on a vase certainly later than 475 B.C., and on all later monuments. The *Supplices* is then earlier than 475 B.C., therefore the earliest extant play of Aeschylus. The *Prometheus* is later than 475 B.C.; probably the date adopted by von Christ — not much before 468 B.C. — is correct.

Assteas and the Greek Stage. — In *Hermes*, 1901, pp. 81–86, B. Graef discusses the vase by Assteas in Madrid, with the representation of Heracles killing his children, which E. Bethe, *Jb. Arch.* I, XV, 1900, pp. 59 ff., thinks gives us information about the Greek stage. Graef shows that this is not the case. He also discusses the S. Angelo terra-cotta with its representation of a Roman stage, which Bethe, *l.c.* p. 61, republishes after Petersen, *Röm. Mith.* XII, 1897, p. 340. A corrected drawing of the scene on the vase by Assteas is given in *Arch. Anz.* 1900, p. 224.

Silenus before Midas. — A vase in the Naples Museum, published by H. Lucas in *Röm. Mith.* 1900, pp. 229–234 (2 figs.), shows in relief six figures, the central one Silenus, who is brought before Midas, seated on the right. The scene has been elsewhere explained as representing Heracles before Busiris.

A Vase with a Scene of a Drama. — In *Röm. Mith.* XV, 1900, pp. 261–269 (1 pl.; 2 figs.), Giulio Em. Rizzo describes a vase found at Centuripe and now in Catania. He assigns it to Cumae and to the middle of the third century B.C. On one side is represented a *φλιάξ*, on a stage approached by stairs in front, about 1 m. high. The characters are Heracles, Hermes, and a woman, and it is suggested that the subject is drawn from the *Alcestis* of Euripides.

Notes on Greek Vases. — In *Hermes*, 1901, pp. 94–96, B. Graef interprets as Dionysus the figure hitherto regarded as female which follows Hephaestus on the vase published by Loeschke, *Athen. Mith.* XIX, pl. viii. *Ibid.* pp. 96–97, he explains that the goat satyr on the black-figured vase published by Bethe, *Prolegomena zur Geschichte des Theaters*, p. 339, is not beardless, but his beard is supposed to be hidden, as his head is turned away. *Ibid.* pp. 97–102 (fig.), he shows that the figure fighting with bow and arrow among the gods to the left of the chariot of Ares and Aphrodite on the Melian vase with representation of the battle of the gods and giants (*Monuments Grecs*, 1875, pls. i, ii, *Wiener Vorlegeblätter*, VIII, 7) is Bendis. Her headdress, with a griffin's comb upon it, was first given to Thracians, then to Asiatics. *Ibid.* pp. 102–106, he shows by comparison with Attic and Italic vases and other works of art that the vase from Ruvo with the Talus episode of the Argonautic myth is not Attic, but was made in lower Italy.

INSCRIPTIONS

Studies in Greek Agonistic Inscriptions.—In the *Transactions of the American Philological Association*, XXXI, 1900, pp. 112-137, Edward Capps discusses agonistic or choregic inscriptions, especially those of Delos and Delphi. He identifies a number of persons mentioned, and corrects some readings given by editors of the texts. The omission of the mention of the didascalus after the mention of the choreutae in Soteric inscriptions of Delphi shows that the chorus was trained by the same man who trained the actors, and therefore that it had an essential part in the play even in the days of the New Comedy.

The Inscription C.I.G. I, 1118.—In *Rhein. Mus.* 1901, pp. 233-246, M. Fränkel discusses the inscription from Argos recording a decree of a Greek alliance in reply to a message from the Persian king. He gives the reading of Wilhelm (*Jh. Oesterr. Arch. I.* III, 1900, pp. 144 ff.), and a new reading. He finds it impossible to assign any definite date, though the decree is earlier than the time of Alexander.

Not the Decree of Archinus.—The Athenian decree in honor of those who joined in the return from Phyle (*Athen. Mith.* XXIII, 1898, pp. 27 ff.; *ibid.* XXV, 1900, pp. 34 ff.; cf. *Am. J. Arch.* III, 1899, p. 131; V, 1901, p. 239) is not the decree of Archinus (Aeschin. III, 187), for in this decree the metics could not have been given precedence over the citizens. It is rather the parallel decree giving similar rewards to the metics, and this is confirmed by the list upon the back of the stone, where the names are for the most part accompanied by the occupations, a procedure unknown in lists of native Athenians, but common enough in the case of metics. The list contains the names of the new citizens arranged by tribes. There seems no place for this decree in the archonship of Pythodorus, and the restoration *Ἐναίετος* is therefore to be preferred, and the decree of Archinus probably to be dated in the same year. (A. KÜRTE, *Athen. Mith.* XXV, 1900, pp. 392-397.)

Ancient Cretan History.—In the *Atti d. R. Istituto Veneto di Scienze, Lettere, ed Arti*, Vol. IX, Series vii, 1897-98, pp. 1509-1591, Angelo Scrinzi publishes an account of the war of Lyttos (220 B.C.) and the Cretan treaties, with especial regard to the treaties preserved in the archaeological museum of the Ducal Palace at Venice. The treaties are discussed in detail, a general sketch of Cretan history is prefixed, and an appendix on the *κοινὸν τῶν Κρη-ταίων* is added.

Amphictyonic Decrees in Honor of Dionysiac Artists.—Under the title 'Inscriptions de Delphes: Décrets amphictyoniques en l'honneur des artistes dionysiaques d'Athènes,' G. Colin publishes in *B.C.H.* XXIV, 1900, pp. 82-123, two decrees in favor of the Dionysiac artists of Athens. The first is in two parts: First, a decree of the first part of the third century granting the artists various privileges and exemptions; secondly, a confirmation of these grants in the second half of the second century. A copy set up at Athens, found in 1866, is published in *C.I.A.* II, 551. The two copies make possible an almost complete restoration. Colin gives a collation of the documents, and shows that the ancients did not set a high value on minute accuracy in such cases, pointing out the importance of these divergencies for the criticism of the text of Thucydides (V, 47). The docu-

ment enables us to complete two lists of hieromnemons. The second decree also existed in Athens, and two fragments are preserved in *C.I.A.* II, 552 *a*, and IV², 551 *c*. Colin gives a detailed discussion and commentary on this decree, in the course of which he restores the fragment published by Couve in *B.C.H.* XVIII, 1894, p. 249. After the preamble the document contains a long account of the services of Athens as the first to form a college of artists, to raise men from barbarism to civilization, to spread abroad the gift of the mysteries, to give men that knowledge of grain which had been received from the gods, and especially as the first to institute thymelic and scenic contests, and as the mother of tragedy and comedy. Because of all these services of Athens, and other good deeds of the artists, the latter are granted the right of *χρυσοφορία*, which they seek, and all Greeks are forbidden to interfere with its exercise.

In *B.C.H.* XXIV, 1900, pp. 216-221, A. Wilhelm adds some notes on the text of these inscriptions, and observes that the Eleusinian decree (DITTENBERGER, *Sylloge*², 20) existed in another copy on the Acropolis, of which the small fragment preserved shows several divergencies from the Eleusinian text, although it is contemporary, and apparently by the same stonecutter.

New Readings of a Milesian Decree. — In *R. Ét. Gr.* 1901, pp. 92-96, Maurice Holleaux reprints, with many new readings, the text of lines 1-26 of the inscription published by Haussoullier, *R. de Philologie*, XXIV, 1900, pp. 243-271. It is a decree of the first years of the third century B.C., passed on the motion of Demodamas, who was strategus of Seleucus Nicator and Antiochus I, in which the people of Miletus thank the Prince Antiochus (afterward Antiochus I) for his generosity to the temple of Didymaeon Apollo.

A Naxian Inscription. — The rock-cut Naxian inscription, *C.I.G.* 2422 = *I.G.A.* 411, is published in facsimile by Paul Kretschmer, *Jh. Oesterr. Arch.* I. IV, 1901, pp. 142-144, and read *Δωροφεία κα(ὶ) Καρίων. οἰφάλης*. The last word is equivalent to *πόρνος*. A rude *graffito* of a plough below the inscription may refer to the relation of the two slaves, Carion and Dorophea.

The New Fragments of Archilochus. — In *R. Ét. Gr.* 1901, pp. 71-91, Am. Hauvette discusses the new fragments of Archilochus published from papyri in Strassburg (by REITZENSTEIN, *Sitzb. Berl. Akad.* 1899, pp. 857 ff.), and an inscription at Paros (by F. HILLER VON GÄRTRINGEN, *Athen. Mitth.* 1900, pp. 1-22; cf. *Am. J. Arch.* 1901, p. 98). He finds that the papyrus fragments are properly ascribed to Archilochus, and gives a variety of notes on all the fragments.

On an Inscription from Patmos. — In *R. Ét. Gr.* 1900, pp. 464-466, M. Holleaux suggests in the inscription from Patmos (DITTENBERGER, *Sylloge*², No. 681), at the beginning of l. 17, τὰ Ἐρμαῖα for τασίμαια, and at the end of the inscription ἡ δὲ ἱερῶσύν[η τοῦ Ἐρμῶς ἔστω] Ἠγγισάνδρου.

Unpublished Rhodian Inscriptions. — In the *Atti d. R. Istituto Veneto di Scienze, Lettere, ed Arti*, LVII, 1898-99, pp. 252-286, Angelo Scrinzi has published, from the manuscript of the Swedish Dr. Hedenborg, who lived many years at Rhodes, and died in 1864, forty-six inscriptions. Several of these supplement fragmentary inscriptions published elsewhere, the most important being HILLER V. GÄRTRINGEN, *Inscriptiones Graecae Rhodi, etc.* (in the new *C.I.G.*), Nos. 108 and 926.

Inscriptions from Tegea, Antioch, and Dokimion.—In *B.C.H.* XXIV, 1900, pp. 285–299, pl. viii, P. Perdrizet publishes (1) A Tegean inscription (*B.C.H.* XVII, 1893, p. 14; DITTENBERGER, *Sylloge*,² No. 700) from a new copy and a photograph. It is of great interest for the history of Greek dramatic contests. (2) Two inscriptions from Antioch on the Orontes. The first, ἡ μάκρα Γοργονίου ἄρκα, shows μάκρα (=μάκτρα) in the sense of sarcophagus or tomb, and the mixture of Latin words in the Greek of Antioch, since ἄρκα=arca. The second is an epitaph of the ordinary Syrian type, followed by an extract from the will, which contains the word κυρκήσια=circensia. (3) A Christian inscription from Dokimion in Phrygia (*B.C.H.* XVII, 1893, p. 291; RAMSAY, *Cities and Bishoprics of Phrygia*, p. 745, No. 689), which is here interpreted as a talisman against φθόνος, i.e. the Evil Eye. This use of φθόνος is studied, and the inscription discussed from literary and historical points of view.

Inscriptions from Thebes and Charadrus.—At the Institut de Correspondance Hellénique, January 25, 1899, Th. Homolle presented two unpublished inscriptions. One from the Cabirium of Thebes, probably of the second half of the third century, runs as follows:—

Ἀσωποκλῖδαο ἄρχοντος Θειβέυ ἀπὸ τῶν τελεστειριῶν τὸ πρόθυρον καβίρου
κῆ παιδί, ἱερειᾶδδοντος Φοξίνω Ἀθανοδωρίω, Ἰσμενικέταο Σαμῆω, καβίρι-
αρχιόντων Κριτολάω Κονδωνίω, Δητολάω Χαριλαίω, | Γόνθωνος Τιμώνδαο, γραμ-
ματίνδοντος Νικιάο | Ξενοκρατείω.

The other is an inscription in honor of Septimius Severus from Charadrus in Cilicia, in which that town is called ἐπίνειον of Lamos. It is thus of importance for the situation of Lamos, the exact position of which has been disputed. It is now clear that it must have been in the upper part of the valley of the Charadrus. (*B.C.H.* XXIII, 1899, pp. 587–592.)

Carnea at Thera.—In *Hermes*, 1901, pp. 134–139, F. Hiller v. Gärtringen publishes an inscription of about 500 B.C. cut in the rock, not far from the Zoodochos Pege in Thera. He reads the inscription Ἀγλωτέλης πρᾶτισ-
τος ἀγορὰν ἡκάδι | Κα[ρ]νήμα θεὸν δείπν[ι]ξέν ἡο(ῦ)ν παντῖδα | καὶ Λακαρτῶς,
and gives as its meaning: “Agloteles, son of Enipantidas and Lakarto, first of all in public speaking, prepared for the God a Carnean feast on the twentieth (of the month Carneus).”

Two Inscriptions Containing Curses.—In *Jh. Oesterr. Arch.* I. IV, 1901, Beiblatt, pp. 9–18 (2 figs.), A. Wilhelm shows that the curse in Bukarest (DITTENBERGER, *Sylloge*³, 816) is not the one published in Le Bas' collection (*Nes*, 2054; cf. *Expédition de Morée*, III, pl. 13), which is now in the National Museum at Athens. The text of the two inscriptions is given. They are alike but for the names, Heraclea and Marthine, of the dead women whose murderers are cursed, and one superfluous word in the Bukarest inscription. They are from Rheneia, and belong to the second or early first century B.C. The writers were evidently Jews. The gravestones δὲ Ἀράκλῃα and Μαρθέινῃ (*C.I.G.* II, add. 2322 b, 69 and 78) may be those of the persons referred to in the curses.

The Pontarch and the Ἀρχιερεὺς Πόντου.—In the *R. Ét. Gr.* 1901, pp. 138–141, Franz Cumont comments on part of an inscription copied by Anderson at Sebastopolis in Pontus (Soulou-Seraï) in 1899 (see *J.H.S.* 1900, p. 154). It celebrates a man who has been made a citizen of Tomi, M.

Ἀντώνιον Σεργία Ρούφον . . . πονταρχήσαντα ἐν τῇ μητροπόλει τοῦ Πόντου Νεοκαισαρείᾳ. The title "Pontarch" is analogous to Asiarch, Galatarch, etc. There were three Pontarchs; (1) of the Pontic hexapolis, the metropolis of which was Tomi, (2) of the Greek cities of the northern coast of Asia Minor, the metropolis of which was Amastris or Heraclea, (3) of the Pontus Mediterraneus. This inscription states that the Pontarch at Tomi wore a crown of gold and a purple robe. These were insignia of the ἀρχιερεὺς. The view that the Pontarch and the chief priest were identical therefore receives confirmation.

The Greek Inscription of the Temple of the Dioscuri at Naples.—In the *Arch. Stor. Nap.* 1901, pp. 315–322, Vittorio Spinazzola publishes a fragment of the inscription *C.I.G.* 57962; *I. G. Sic. It.* 714. The fragment was found in the cloister of the Certosa di S. Martino on the back of an inscription in honor of D. Didaco Manriquez, Marquis of Casella, dated 1637 A.D. The inscription on the epistyle of the temple is now seen to have been in two lines. The reports of earlier writers about this temple, now the church of San Paolo Maggiore, are discussed.

A Greek Inscription from Pozzuoli.—In *C. R. Acad. Insc.* 1901, pp. 192–196, R. Cagnat publishes the inscription from Pozzuoli (*Not. Scavi*, 1901, p. 167) now in the museum of the University of Michigan, and restores it as follows: Ἐπὶ ὑπάτων Λουκίου Καίσε . . . | καὶ Τυρίοις ἔτους σδ', [μ]ηνὸς Ἀρ[τεμ]ισίου ια', κατέπλευσεν ἀπὸ | Τύρου εἰς Ποτι[δ]οῖς Θεὸς [Ἡ]λ[ι]ος Ἀρεπτηνός[ς], ἤγαγεν [δὲ] Ἡλεῖμ κατ' ἐπιτο[λὴν τοῦ Θεοῦ | *Pro sal(ute) Imp(eratoris) Domitiani [Aug(usti) . . .]*. *L(ocus) c(oncessus) [d(ecreto) . . .]*. The date is May 29, 79 A.D. A sun-god from Arepta (Arfa?) was brought to Pozzuoli by a Tyrian named Elim. A note (*ibid.* pp. 196–198) by P. Berger confirms the connection of Ἀρεπτηνός with Arfa. *Ibid.* p. 200, Clermont-Ganneau suggests for Θεὸς [Ἡ]λ[ι]ος (l. 4), Θεο-σ[έβ]ιος. The reference would then be to a journey by a Tyrian Theosobius, and ἤγαγεν δὲ Ἡλεῖμ would refer to the accomplishment of some sacred rites by him.

Inscriptions from Various Places.—In *R. Ét. Gr.*, 1900, pp. 493–503 A. E. Contoleon gives the text of seven simple epitaphs from Athens, two from Peiraeus, one longer epitaph dated 205 A.D., from Thessalonica, a short inscription for a base of a statue from Volo, a dedication to Hermes Kranaios from Crete, an epitaph from Pergamum, three epitaphs and three fragments from Ephesus, an epitaph (?) from Magnesia on the Maeander, nine inscriptions from Smyrna, one of which is part of a list of *daphnephori*, another a dedication, the rest apparently epitaphs, an epitaph from the Cilbian Plain in Lydia, a lead seal from Coloe, two epitaphs (one with a curse) from Magnesia ad Sipylum, a record of a sale from Philadelphia, an epitaph (?) from Thyatira, twelve inscriptions from Tralles, most of which are epitaphs, one an inscription of some mystae, an epitaph from Apamea, an epitaph from Attuda (?), three from Philomelium, and two from Isbarta.

Notes on Inscriptions.—In the *Revue des Études Anciennes*, 1901, pp. 115–130, Maurice Holleaux gives notes on the following inscriptions: DITTENBERGER, *Sylloge*,² No. 247, No. 330, No. 790; DITTENBERGER, *Sylloge*,¹ No. 158; O. KERN, *Die Inschriften von Magnesia am Maeander*, Nos. 15a, 15b, 19, 28, 37, 39, 41, 43, 46 (= Dittenberger's *Sylloge*,² No. 259), 56, 61, 62, 63,

80, 83, 85, 86, 97, 100b, 101, 103. In *Jh. Oesterr. Arch. I.* IV, 1901, Beiblatt, pp. 21-36, A. Wilhelm gives notes on *Inscripfen von Magnesia*, Nos. 5, 6, 7b, 15a, 16, 19, 28, 32, 38, 44, 49, 50, 52, 53, 56, 57, 62, 63, 73b, 80, 86, 89, 90, 91a, c, d, 92b, 101, 102, 110, 124, 138, 158, 163, 164, 165, 179, 180, 189, 193, 252, 273, 306, 309, 343.

Ancient Stenography. — Two articles on ancient short-hand, in the new *Archiv für Stenographie*, were discussed by M. Rubenstein at the March meeting of the Berl. Arch. Gesellsch. He reasoned from the occurrence of Greek short-hand signs on the tablet on the gravestone of a schoolboy, found in Dalmatia, that short-hand was a part of ordinary education. If this tablet could be read, it might give the key to the numerous, as yet undeciphered, papyrus documents in short-hand. (*Arch. Anz.* 1901, p. 16.)

GENERAL AND MISCELLANEOUS

The Discoveries at Cnossus. — In the *Annual of the British School at Athens*, VI, 1899-1900, pp. 3-70 (2 pls.; 12 figs.), Arthur J. Evans describes the excavations conducted by him in the palace at Cnossus (see *Am. J. Arch.* 1900, p. 490; 1901, p. 94). This is the most detailed account yet published. *Ibid.* pp. 70-85 (5 pls.; 14 figs.), D. G. Hogarth describes excavations and explorations at Cnossus outside of the ancient palace. Houses and walls were found of various dates, some belonging to the period of the Kamares pottery, the time to which the earliest walls of the palace belong, which Mr. Evans places approximately at 2000 B.C. In rooms here and at Melos square pillars are found which have no structural purpose. Perhaps they were objects of worship. *Ibid.* pp. 85-92, F. B. Welch contributes 'Notes on the Pottery.' The earliest pottery of Cnossus belongs to the neolithic age. This is followed by Kamares ware, and this by Mycenaean ware. The Mycenaean ware is for the most part of the third class with *Firnismaalerei* distinguished by Furtwängler and Loeschcke. Geometric ware is poor. The discovery of some ware similar to vases found in Palestine, Syria, and Cyprus indicates Phoenician manufacture.

At the March meeting of the Berl. Arch. Gesellsch., R. Zahn discussed in some detail the Mycenaean palace at Cnossus. He noted the superiority of the frescoes over similar work in Egypt, the social atmosphere indicated by the position of women, the religious meaning of the pillar and horns, the Artemis-character of the Mycenaean goddess, the probable Cretan origin of "Mycenaean" pottery, and especially the cult-origin of the Cretan pictographic symbols, which he interprets differently from Evans, and which he considers as at a less advanced stage than the earliest Egyptian hieroglyphs. (*Arch. Anz.* 1901, pp. 19-25.)

Prehistoric Crete. — In the *Chron. d. Arts*, June 15, 1901, S. Reinach begins a series of articles on prehistoric Crete. The first article tells of the discoveries of various men, from Buondelmonte, in 1422, to Halbherr, Orsi, and Fabricius, with special mention of W. J. Stillman. In the second and third articles (June 29) the discovery of the great inscription at Gortyn and of some dome tombs is described, and to Milchhoefer the credit is given of first seeing clearly the importance of Crete in the study of "Mycenaean" civilization. The connection of Crete with southern Italy, as shown by Ettore Pais, is emphasized. In the same number is a summary of a discussion by E. Pottier of the recent excavations at Cnossus, at the meeting of

the Académie des Inscriptions, June 7. In this attention is directed to evidences of Egyptian and Babylonian influence at Cnossus.

Recent Discoveries in Greece and the Mycenaean Age.—In the *North American Review*, March, 1901, pp. 431-444, Charles Waldstein contributes an article on recent discoveries in Crete, at the Argive Heraeum, and elsewhere, emphasizing the importance of the new light they shed upon early ages in Greece.

Mycenaean Tree and Pillar Cult.—An article by A. J. Evans in *J.H.S.* XXI, 1901, pp. 99-204 (1 pl.; 70 cuts), presents and interprets, under thirty sub-headings, the mass of available evidence on the Mycenaean religion with its widespread connections and survivals. It was an aniconic cult, allied to the primitive Semitic worship, the divine presence being adored in trees and in pillars of stone or wood, either free-standing or structural, which became sacred symbols like the Christian cross. Cult scenes, or at least the sacred object, often with guardian beasts, are found on Mycenaean cylinders, ring-seals, frescoes, vases, sculpture, as the Lion Gate, and in actual existence, in the megalithic sepulchral structures of the Mediterranean islands. The divinities, a male and a female, originally a light-god and his consort, survived as the Cretan and Carian Zeus, the Thracian and Roman Mars, the Amyclaeon Apollo, as Dione, Cybele, and the various forms of Aphrodite. The aniconic character was never wholly superseded, even in Greece, by the Hellenic anthropomorphic conception, and it continues almost unchanged in Moslem usage down to the present day.

Scenes on the Shield of Achilles.—In *R. Arch.* XXXVIII, 1901, pp. 198-212 (11 figs.), A. Moret compares paintings on the walls of Egyptian tombs with those parts of the Homeric description of the shield of Achilles which relate to tilling the soil (*Iliad*, XVIII, 541-547), harvesting (*ibid.* 550-560), the vintage (*ibid.* 561-568), and the cattle attacked by lions (*ibid.* 573-586). The Ionic poets might have known the Egyptian paintings directly or through the Phoenicians.

The Connection of Phidias with the Parthenon.—In *Harvard Studies in Classical Philology*, XII, 1901, pp. 211-220, Harold N. Fowler discusses the origin of the statements contained in Plutarch's 'Life of Pericles,' Chapter XIII. He finds that the statements connecting Phidias with the Parthenon are derived through Ephorus from Stesimbrotus, who wished by them to cast a slur upon Pericles. The statements deserve no credence. There is, therefore, no evidence of any connection of Phidias with the Parthenon, unless it be derived from the style of the sculptures.

Primitive Arcadian Worship.—At the Institut de Correspondance Hellénique on March 22, 1899, P. Perdrizet spoke on terra-cottas from Lycosura and Arcadian mythology. At Lycosura many terra-cottas have been found representing a draped female divinity with the head of a cow or sheep. These are the ἀγάλματα which were offered to Δέσποινα according to the ritual, and seem to belong to Roman times. They are soon to be published in the *B.C.H.* Pausanias (VIII, 42) says that at Phigalia a horse-headed Demeter was worshipped. Arcadia preserved the original pre-Dorian cults, and to them belong these deities with the heads of animals. Such divinities are found in precisely those places where Dorian influence did not penetrate, as in Cyprus, Ionia, and Etruria, which is influenced by Ionia. These divinities are not to be attributed to Egyptian or Semitic influence,

but to primitive cults of the Pelasgian Arcadians. Zeus Lycaeus is a wolf-god. (*B.C.H.* XXIII, 1899, pp. 635-638; 1 cut.)

The So-called Capuchin Plans of Athens.—In *Harvard Studies in Classical Philology*, XII, 1901, pp. 221-230 (2 pls.), J. R. Wheeler discusses two plans of Athens, the one published by Guillet de St. Georges in 1675 and the one published by Laborde in 1854. The second is derived from a drawing brought back from the Levant by French engineers in 1685. The conclusions reached are that Guillet's plan is derived from an older original than the plan of the engineers, but that it is not safe to draw inferences from it touching the continued existence in the seventeenth century of the ruins which the map shows. Dörpfeld's contention that Guillet's plan proves the existence of the Enneacrusus west of the Acropolis in the seventeenth century is not justified.

History of Investigations at Paros.—In *Athen. Mith.* XXV, 1900, pp. 341-372 (pls. v, vi), O. Rubensohn, in the first of a series of articles on Paros, publishes, from a manuscript of the fifteenth century, Buondelmonte's account, completed in 1420. It is accurate, but the map is defective. Ciriaco of Ancona was at Paros twice in 1445. Rubensohn publishes his description from a Munich manuscript, and also a letter now in Florence. Several of Ciriaco's drawings are also published. In the sixteenth and seventeenth centuries only Francesco Piacenza, who was at Paros in 1660, left a record of any importance. More recent works on the island are briefly discussed.

Aegis-Άγρηνόν.—In *B.C.H.* XXIV, 1900, pp. 254-262 (2 cuts), Miss Jane E. Harrison supplements her discussion of the omphalos (*J.H.S.* XIX, 1899, p. 225) by a consideration of the fillets or network with which it is often covered. Aegis denotes not merely the goatskin worn in the time of Herodotus (IV, 188-189) by the Libyans, but also τὸ διὰ στεμμάτων πεπλεγμένον δίκτυον (Suid.). The ἀγρηνόν is defined by Pollux (*Onom.* IV, 116) as πλέγμα ἐξ ἐρίων δικτυοειδὲς περὶ πᾶν τὸ σῶμα, ὃ Τερεσίας ἐπεβάλλετο ἢ τις ἄλλος μάντις. Therefore the δίκτυον of the omphalos is an ἀγρηνόν. The Γοργόνες (Eur. *Ion*, 225) are also remains of the primitive skin garment. The Gorgoneion is originally the goat's head, worn with the skin. When the oracle was transferred to Zeus and Apollo these heads, which had remained as prophylactic masks, became the eagles, frequently represented on either side of the omphalos.

The Modesty of the Scythians.—In *Hermes*, 1901, pp. 86-94, B. Graef discusses the golden gorytus from Nicopolis (*Compte Rendu*, 1864, pl. iv; *Wiener Vorlegeblätter*, Series B, pl. 10), which Robert, *Arch. Anz.* 1889, p. 151, *Nekyia* (Sixteenth *Hallisches Winckelmannsprogramm*), p. 38, connects with the art of Polygnotus. Graef shows that the work is of a date much later than Polygnotus, and can have no immediate connection with his work. Its execution is good, but the workman has no artistic ability. He was perhaps not a Greek at all. The drapery is, as is often the case in modern works, unnaturally arranged so as to cover the private parts of the men. This is not a Greek trait, but shows that the gorytus was made for a Scythian buyer.

Weights from Thera.—In *Hermes*, 1901, pp. 113-133, F. Hiller v. Gärtringen describes some weights found at Thera, and C. F. Lehmann discusses the development of the system of weights from early Babylonian to Roman times.

The Geography and History of Calymna.—In the *Atti. d. R. Istituto Veneto di Scienze, Lettere, ed Arti*, LVIII, 1898-1899, ii, pp. 205-251, Angelo Scrinzi gives a description of the island of Calymna and a sketch of its history and its constitution, with appendices on the name, which was *Καλύδνα* until the fourth century, the coinage, and the calendar of the island.

The Battle of Salamis.—In *Jh. Oesterr. Arch.* I. IV, 1901, pp. 90-111, Adolf Bauer discusses the battle of Salamis, and comes to the conclusion that the accounts of Aeschylus and Herodotus are to be accepted.

ITALY

ARCHITECTURE

The Arch of Tiberius.—Near the temple of Saturn, between the rostra and the Basilica Julia, foundations have been found which are certainly those of the arch of Tiberius. (*Berl. Phil. W.* February 23, 1901.)

The Temple of Venus Pompeiana.—A. Mau describes in detail in *Röm. Mith.* XV, 1900, pp. 270-308 (2 pls.; 10 figs.), the remains of the Temple of Venus Pompeiana recently excavated at Pompeii, west of the Basilica. The earliest temple and surrounding colonnade were of tufa. At the beginning of the empire, a marble temple was built, hexastyle, with antae, of which the remains are considerable, not only of the foundations, but of the marble decoration. On the completion of this temple, a two-storied marble colonnade was begun, on a larger scale than the original one of tufa. This was incomplete when, together with the temple, it was overthrown by the earthquake of 63 A.D. A new and larger temple was begun, but the foundations were unfinished in 79 A.D. If it had been completed, it would have been the largest and finest temple in Pompeii.

SCULPTURE

A Roman Imitation of a Greek Demeter.—In *Röm. Mith.* 1900, pp. 181-197 (2 pls.; 3 figs.), W. Amelung discusses a draped female figure. The face is Roman, is possibly a portrait of the wife of Lucius Verus, but the remainder of the figure, including the head, is a good copy of a Greek original of the second quarter of the fifth century B.C. The original was of bronze, and probably represented Demeter. Other existing works are compared, especially the Hestia Giustiniani and the Aspasia in Berlin, and are shown to be of the same origin. The writer believes this type to have been developed by Onatas of Aegina, though he admits that the proof is insufficient.

The Dioscuri of the Quirinal.—E. Petersen has made a minute study of the Dioscuri of the Quirinal, of which he gives the result in *Röm. Mith.* XV, 1900, pp. 309-351 (3 figs.). Marks on the figures and their artistic treatment show that both men and horses originally stood in high relief against a flat wall. They have always occupied the same relative positions as at present. The Dioscuri are commonly connected with springs or fountains; for example, in the precinct of Juturna, their statues stood in the middle of the *lacus*, an altar between them. It is probable that the statues of the Quirinal formed a part of one of the numerous fountains of Rome.

Reliefs relating to the Dioscuri.—In *R. Arch.* XXXVIII, 1901, pp. 46-58 (4 figs.), G. Gastinel discusses five fragmentary terra-cotta reliefs

from Tarentum. Three represent each a youth beside or near whom is an amphora. One youth stands beside a horse. One relief represents the Dioscuri riding in triumph, and one represents them coming to a sacred banquet. All the reliefs relate to the Dioscuri. The amphora was a regular attribute of the Dioscuri at Tarentum. These reliefs were probably set up in the houses of members of a fraternity of Dioscuriastae.

The Relief with the Inscription C.I.L. VI, 426.—In the *Sitzb. Berl. Akad.* 1901, pp. 387-398 (2 figs.), R. Kekule v. Stradonitz discusses the relief with the inscription *I(ovi) O(ptimo) M(aximo) Summo E(ksuperantis)simo*, first published by Spon and then by Winckelmann. The relief had disappeared, but has recently been bought by the Berlin Museum. It represents Zeus with a cornucopia. The drapery, beard, and hair are archaistic. It is shown that this relief was one side of a square base. On the side adjoining to the left was a relief of one of the Dioscuri with no archaistic qualities. The other two sides have disappeared. The inscription belongs at earliest not much before 200 A.D., perhaps somewhat later. Reliefs and inscription belong to the same time. This is interesting, as it fixes a later date than has hitherto been assumed for a "New-Attic" relief.

The Poros Statue in Munich.—In *Athen. Mitth.* XXV, 1900, pp. 447-450 (1 cut), C. Walzinger identifies the statue of a warrior published by Furtwängler (*Athen. Mitth.* XXI, 1896, pl. i) with a figure bought at Chiusi in 1827 by Dorow, and published by him in his *Voyage archéologique dans l'ancienne Étrurie*, Paris, 1829. The work therefore belongs to Etruscan art, where it has many analogies, and not among the Greek poros sculptures, where it was placed by Furtwängler.

VASES AND PAINTING

Pottery from Pitigliano.—In *Jb. Arch. I.* XV, 1900, pp. 155-195 (32 figs.), J. Boehlau discusses the pottery from five early Etruscan tombs at Pitigliano (ancient Statonia?), the contents of which, illustrating the development of Italian ceramics under the influence of Greek importation down to the sixth century B.C., have passed to the Berlin Museum. He notes the frequent application of foreign decoration and detail to native forms and *vice versa*, the metallic origin of many forms, the Eastern origin of the crater and its pedestal, among others, and the effect of the change from burning to burial of the dead.

The Frescoes of Boscoreale.—In the *Gaz. B.-A.* 1901, pp. 15-26 (8 figs.), S. di Giacomo describes the house where the new frescoes were found (cf. *Am. J. Arch.* 1901, p. 102) and the one where the treasure of silverware now in the Louvre was found some years ago. The new frescoes show a style of architecture not like any of the styles hitherto known in Pompeian wall paintings, and not corresponding with the statements of Vitruvius, VII, 5. Perhaps in the last period of Pompeii there may have been an awakening of better art and more reasonable decoration. Even the human figures represented in the new frescoes depart from the earlier traditions.

The Alexander Mosaic at Pompeii.—In some sixteenth-century woodcuts and possibly in Raphael's cartoons and compositions by Leonardo, J. Kemke sees such resemblance to the Pompeian mosaic of Alexander's

battle with Darius, discovered in 1831, as to suggest direct imitation. Some form of the entire picture seems then to have been accessible to artists of the Renaissance. (*Jb. Arch. I. XVI*, 1901, pp. 69-73; cut.)

INSCRIPTIONS

The Archaic Inscription from the Comitium.—In *Rhein. Mus.* 1901, pp. 161-166, R. Thurneysen proposes some new readings and explanations of parts of the early inscription found in the comitium at Rome. His discussion is chiefly linguistic. He accepts as the date the second half of the sixth century B.C. In *Jh. Oesterr. Arch. I. IV*, 1901, Beiblatt, pp. 47-56, O. Keller reviews some recent discussions of the inscription, the grave of Romulus, and the two lions, with special reference to the two lions and the scholia of the Pseudo-Acronius. The date of "about 500" is accepted. In *Archaeologia*, LVII, i, 1900, pp. 175-184, is a description of the early monuments in the comitium by Giacomo Boni, translated by St. Clair Baddeley. The paper was read January 25, 1900. A photographic facsimile of the archaic inscription on the stele is given.

COINS

The Arch on the Bronze of Antoninus.—In *Röm. Mitth.* XV, 1900, pp. 352-354, E. Petersen argues that the arch on the large bronze of Antoninus Pius is a part of the Aemilian bridge, and does not represent the ship houses by the Aventine.

GENERAL AND MISCELLANEOUS

Some Antiquities in Sicily.—In *Röm. Mitth.* 1900, pp. 237-260 (1 pl.; 4 figs.), Giulio Em. Rizzo describes a collection of antiquities found in the necropolis near Randazzo, Sicily, and owned by Paolo Vagliasindi of Randazzo. The necropolis was in use from the first quarter of the fifth century to about 125 B.C. The collection includes Attic and Italian vases, terracottas, bronzes, etc., most of which are of little value. Most important is a red-figured oenochoe, of Attic make, dating from about 350 B.C.; it shows the sons of Boreas freeing Phineus from the Harpies. In the same article the writer describes an archaic Panathenaic amphora, privately owned in Catania. It was found in the Greek Catania, and is important, because such vases have been rarely found in Sicily.

The Sarcophagus recently found near Perugia.—The sarcophagus, described *Am. J. Arch.* 1901, p. 103, is described by F. Moretti, *Not. Scavi*, 1900, pp. 553-557; 7 figs.

Continuing the discussion of the tomb in which the sarcophagus was found (pp. 558-561), L. Savignoni shows a remarkable similarity between its equipment and that of a tomb at Todi (*Not. Scavi*, 1886, pp. 358 ff.), and assigns them both to the third century B.C. He thinks that the winged female figure on the engraved mirror is not Venus, but one of her attendants.

The Gallic Cemetery at Montefortino.—A burial-place of the Senonian Gauls near Arcevia, which was opened in 1895-96, and is described by E. Brizio in *Mon. Antichi*, IX, 1901, pp. 617-792 (12 pls.; 31 cuts), gives important evidence of the high degree of civilization attained by the Gauls in the fourth century B.C., their wealth, mode of life, and commercial rela-

tions with Etruscans, and indirectly with Greece. The facts by no means correspond with the ancient accounts of this people.

Gladiatorial Combats a Usual Form of Exercise.—In *Röm. Myth.* 1900, pp. 223–228, M. Rostowzew shows that gladiatorial combats were a regular form of exercise among young Romans of good family. They even assumed the titles of professionals. This explains the words *pinn. iuvenum* in a recently found inscription (*Not. Scavi*, April, 1900, p. 141), which are to be compared with *pinnirapi iuvenes* in Juvenal, III, 158, and the scholiast on the passage.

The Great Mother of the Gods.—Vol. I, No. 3, of the Philology and Literature Series of the *Bulletin of the University of Wisconsin* (110 pp.; 4 pls.; 2 cuts; Madison, 1901), is entitled 'The Great Mother of the Gods.' The author, Dr. Grant Showerman, aims in this work to give the complete history of a single pagan religion, and has presented in orderly narrative all available information regarding the Great Mother, from her first appearance in Asiatic and Greek history to her fall in the last days of the Roman Empire. The work is divided into seven chapters, of which the first relates the circumstances of the introduction of the Great Mother at Rome, and the events which led to it. The second relates what is known of the cult of the Mother prior to its introduction at Rome, and deals with its history in Asia Minor and Greece before 204 B.C. The third chapter treats the cult under the Republic, the fourth, fifth, and sixth its prosperity under the early Empire, and its decline and fall, while the last is devoted to a consideration of the Great Mother in the art, literature, and religion of the ancient world.

This work was done by the author while Fellow in the American School of Classical Studies in Rome (1898–1900), was accepted by the committee, and would have appeared in this JOURNAL had its length permitted.

Was Attis at Rome under the Republic?—In the *Transactions of the American Philological Association*, XXXI, 1900, pp. 46–59, Grant Showerman finds by investigation of literary and archaeological evidence that the worship of Attis was probably not introduced at Rome until after the end of the Republic.

Indians in Ancient Art.—In *Jb. Arch. I.* XV, 1900, pp. 195–218 (9 figs.), H. Graeven discusses the characterization of Indians in ancient art as shown in a mosaic, a silver plaque, and some ivory carvings, all late work. In the Roman sarcophagi with Indian Bacchic scenes, a list of which is given, no such characterization appears.

SPAIN

Alhauran the Ancient Iluro?—In the *Bulletin Hispanique* of the *Revue des Études Anciennes*, 1901, pp. 1–15, M. R. de Berlanga finds that the modern Alhauran, in the province of Malaga, probably represents the ancient Iluro, not the ancient Lauro. Incidentally, he shows that Lauro cannot have been in the province of Malaga, and that the ancient Munda was not on the site of the present Monda.

Sculptures from Cerro de los Santos.—In the *Revue des Études Anciennes* (*Bulletin Hispanique*), 1901, pp. 147–168 (8 pls.; 18 figs.), Pierre Paris gives a catalogue (eighty numbers) of sculptures from Cerro de los Santos not in the National Archaeological Museum at Madrid. The sculp-

tures are, with the exception of a few small bronzes, very fragmentary. They are in various collections at Yecla, Albacete, Alicante, Madrid, Bonete, and in the Louvre.

FRANCE

Ancient Sculpture in the Department of Charente.—In *R. Arch.* XXXVIII, 1901, pp. 272-284 (14 figs.), G. Chauvet describes the ancient statues, statuettes, and figurines in the department of Charente. Few are of artistic value. The materials used are bronze, marble, various stones, and terra-cotta. Most of the objects are of the Gallo-Roman times, some are earlier, and some are rude work, hard to date.

Roman Oculists' Seals.—In *C. R. Acad. Insc.* 1901, pp. 140-152, the Abbé Thédénat publishes two inscribed oculists' seals found near the village of Gran in 1898 and a bronze ring from Naix (Meuse) with the inscription *merito t'le amo*. The seals are similar to those previously known. The inscription of the ring was impressed by means of separate letters in relief.

The First Coin of the Colony of Lyons.—In *C. R. Acad. Insc.* 1901, pp. 82-100 (cut), Henri de la Tour discusses a bronze coin found at Gergovia, and now at Vienne. On the obverse is a female head with a mural crown. Inscription COPIA FELIX. On the reverse Hercules and a bull. Inscription MVNATIA. The first name of the Roman colony at Lyons was Copia Felix Munatia. L. Munatius Plancus founded the colony in the summer of 43 B.C. When Antony obtained control of Gaul he gave the place its old name of Lugudunum, and his influence was so great that the town was spoken of as *colonia Marci*. Augustus returned to the name *Copia*, which was afterward supplanted by the old name in the form Lugdunum.

Inscriptions from Germany in the Correspondence of Oberlin.—In *R. Arch.* XXXVIII, 1901, pp. 59-71, Seymour de Ricci publishes from the Oberlin manuscripts in the Bibliothèque Nationale forty Latin inscriptions from Germany. Some of these copies were made before the copies used in the publications of inscriptions, some are copied from stones now lost. Several are here published with drawings of the stones on which they are cut. Only a few are entirely new, many being contained in Brambach's *Corpus Inscriptionum Rhenanarum*.

GREAT BRITAIN

The Excavations at Silchester in 1899.—In *Archaeologia*, LVII, i, 1900, pp. 87-112 (3 pls.; 10 figs.), is an account of the excavations at Silchester in 1899 by W. H. St. John Hope, with notes on the objects found by George E. Fox. A plan of insula xxii and a plan of the ancient town, showing all discoveries up to November, 1899, are among the plates. For a summary account, see *Am. J. Arch.* 1900, p. 507. In the same issue of *Archaeologia*, pp. 113-124 (4 figs.), W. Gowland describes the remains of a silver refinery found at Silchester, and discusses the method practised.

AFRICA

Some Ancient Sculptures in Algeria.—In *R. Arch.* XXXVIII, 1901, pp. 72-81 (7 figs.), Stéphane Gsell publishes, with brief notes, seven sculptures at Cherchel. (1) A statue of a youth, lacking head, both arms, both feet, and the right leg. It is compared with the figure by Stephanus and the

"Pylades" of the group in the Louvre. Inedited. (2) The seated statue *Musée de Cherchel*, pl. xiii, pp. 135-137, is interpreted as Asclepius. (3) The Pan and Silenus *Musée de Cherchel*, pl. xi, figs. 1 and 2, are published as a group. Pan and Silenus are wrestling. (4) A Telamon in the form of a Silenus, lacking the head and arms, is published. The work is poor. (5) A portrait head of Juba II in the possession of Mr. Boucher, at Cherchel (purchased and offered to the Louvre by the Association historique de l'Afrique du Nord) is published. Juba appears about forty-five years old. (6) A head published in the *B. Arch. C. T.* 1895, p. 56, is identified as Livia, the mother of Tiberius, at about forty years of age. (7) A bust of a chthonic deity of poor workmanship of the third century after Christ, found at Philippeville, is published. It recalls the "Eubouleus" from Eleusis. Attention is called to the chthonic deity published *Musée d'Alger*, p. 38.

A Punic Inscription from Carthage.—In *Biblia*, XIII, 1901, pp. 385 f. (pl.), E. J. Pilcher publishes an inscription found by P. Gauckler at Carthage. The inscription is earlier than the capture of Carthage by the Romans. It reads: "Malkipeles son of Bodmelqarth, son of Malkipeles, son of [— son of] Malkipeles, son of Melqarthpeles of the place of the gods, son of [— son of] Malkikhorem. A pillar of stone [I have erected to the honor of the gods] and my bones [are laid with] the holy ones. [I have preserved] the lives of the holy ones, serving [faithfully. May the] Sun-god [bless] the son of my steps and son of my strengths. My lord [shall inscribe his name in the] books of the register. . . ."

The Colony of Uthina.—Discussing an inscription recently found in the Roman Forum (see *Not. Scavi*, 1900, p. 569 ff.), Lorenzina Cesano gives a detailed account of what is known of the colony of Uthina in Africa. (*Rend. Acc. Lincei*, 1900, pp. 681-688.) The foundation of the colony is assigned to Julius Caesar.

CHRISTIAN ART

GENERAL AND MISCELLANEOUS

Relics from Constantinople.—In the *R. Art Chrét.* 1900, pp. 491-507, F. de Mély completes his treatise on the Sacred Thorn. This will form Volume III of his forthcoming work, *Exuviae sacrae Constantinopolitanae*.

Statuette of the Good Shepherd.—At the Institut de Correspondance Hellénique, January 25, 1899, Laurent gave an account of a statuette of the Good Shepherd now in the Museum of Tchinnili-Kiosk at Constantinople. The type is well known, but this copy is valuable as preserving much of the left arm, which is missing in the other examples. In this case the hand seems to have rested on the hip, a restoration impossible for some of the other statuettes. It confirms the popularity of the type, which is essentially the same throughout the entire Roman Empire during the first Christian centuries. (*B.C.H.* XXIII, 1899, pp. 583-587; 1 cut.)

A Sketch of the History of Sculpture.—In *Progress* (Chicago), VI, No. 4, January, 1901, pp. 276-296 (13 illustrations), William Ordway Partridge publishes a brief sketch of Mediaeval, Renaissance, and Modern Sculpture.

Essay on Architectonic Decoration.—In the *R. Art Chrét.* 1900, pp. 481-490, 1901, pp. 25-36, 212-234, L. Cloquet begins an 'Essai sur la décoration architectonique.' This bids fair to be a veritable treatise of which

three chapters only are as yet published. The illustrations already number over two hundred.

The Illustrated Physiologus in Smyrna. — In the *Byz. Archiv*, II, p. 2, Strzygowski had written an article entitled 'Der Bilderkreis des griechischen Physiologus,' in which he noticed various irregularities difficult to explain. He has now discovered that the manuscript in Smyrna was bound in a way to disturb the original pagination and the applicability of the illustrations. To reestablish the original pagination and to reconsider some of the miniatures is the object of an article which he has published in the *Byz. Z.* 1901, pp. 218-222.

French Furniture at the Paris Exposition. — In the *Gaz. B.-A.* 1901, pp. 123-135, Émile Molinier, without specific attention to the objects exhibited at the exposition, presents a succinct and interesting résumé of the history of French furniture up to the end of the eighteenth century.

French Furniture in the Louvre. — In 1881 the French Government established a Museum of French Furniture in the Garde-Meuble; in 1901 this collection was transferred to the Louvre. Here it receives recognition as a section of French art. A general notion of this collection is given by Émile Molinier in the *Gaz. B.-A.* 1901, pp. 441-460.

Early Playing Cards. — In *Archaeologia*, LVII, i, 1900, pp. 185-200 (3 pls.), Robert Steele has 'A Notice of the Ludus Triumphorum and some Early Italian Card Games; with some Remarks on the Origin of the Game of Cards.' Two Italian cards of about 1440 and four cards of the fifteenth century in the Bibliothèque Nationale are published.

BYZANTINE AND MEDIAEVAL ART

Byzantine Seals. — In *R. Ét. Gr.* 1900, pp. 467-492, Gustave Schlumberger describes 158 inedited Byzantine seals, twenty-two of which are published in cuts.

GREECE

Byzantine Architecture in Greece. — R. W. Schultz and H. S. Barnsley, former members of the British School at Athens, have made an important contribution to our knowledge of Byzantine Architecture in Greece by their publication, *The Monastery of Saint Luke of Stiris in Phocis and the Dependent Monastery of Saint Nicolas in the Fields near Skripou, in Boeotia* (London, Macmillan & Co., 1901, 4to, XII, 76 pp.; 48 figs.; 60 pls.). Notwithstanding the fact that the same monastery will shortly be published by M. Diehl for the *Monuments de l'Art byzantin*, this volume is welcome for the clearness of its descriptive text and for the abundance of the illustrations. For the historical portion of their work, the authors of this volume have had the assistance of the three volumes published in Greek by G. P. Kremos, Athens, 1874-80, and in the consideration of the mosaics they have had before them the valuable publications of M. Diehl. The merit of their volume consists chiefly in the section dealing with the architecture. The various ground plans, sections, elevations, details of ornament, etc., set before us very clearly the architecture of this once famous monastery of St. Luke of Stiris. Built at the end of the tenth century, this monastery shows strongly in its architecture the influence of Hagia Sophia of Constantinople, while its decoration does not yet betray the stereotyped forms of the Mt. Athos

manual. It is much to be regretted that neither in England nor in America is there any permanent endowment for the furtherance of researches in this important sphere of Architectural Archaeology.

ITALY

The Crown of Iron at Monza.—In the *R. Art Chrét.* 1901, pp. 12-24, Mgr. X. Barbier de Montault completes his study entitled 'La Couronne de fer, au trésor de Monza (Lombardie),' adding a very thorough bibliography.

The So-called Dalmatica of Charlemagne.—In the Second Congress of Christian Archaeology, held in Rome in April, 1900, M. Battaudier spoke of the Dalmatica in the treasury of S. Peter's, Rome, as dating from the end of the eleventh century. Tradition placed it still earlier, as having been worn by Charlemagne. In the *R. Art Chrét.* 1901, pp. 52-54, Jos. Brann assigns his reasons for believing that it was made during the fifteenth century.

Pontifical Golden Roses.—Under the title 'Les Roses d'or pontificales' in the *R. Art Chrét.* 1901, pp. 1-11, Eugène Müntz presents the first instalment of his researches in the Vatican archives, concerning the origin and history of the papal ceremony of the Presentation of the Golden Rose. Hitherto only ten recipients of the Golden Rose have been known for the fourteenth century. Müntz enlarges the list to forty.

FRANCE

A Sculptured Head at Dijon.—Under the title 'Tête Sculptée à Notre-Dame de Dijon (XIII Siècle),' in the *R. Art Chrét.* 1900, pp. 472-480, Henri Chabeuf discusses a striking portrait head which still survives in the north transept of Notre Dame de Dijon. The sculptures of this church represented the flower of Burgundian sculpture of the thirteenth century. The figured sculptures were almost entirely destroyed at the time of the French Revolution. This vigorous head is, therefore, an important survival.

Mural Paintings of Forez.—In *R. Arch.* XXXVIII, 1901, pp. 10-16 (2 pls.), Joseph Déchelette discusses mural paintings in Forez, giving an analysis of the book *Les peintures murales du moyen âge et de la Renaissance en Forez*, published by the Société de la Diana, under the direction of Joseph Déchelette and E. Brassart, with the collaboration of Charles Beauverie, Abbé Reure, and Gabriel Trévoux (Montbrison, 1900, E. Brassart, 68 pp.; 20 pls. 29 figs. folio). Paintings in the priory of Charlieu, the church of Saint-Romain-le-Puy, Sainte-Croix-en-Jarez, Saint-Bonnet-le-Château, and the castle of Valprivas are especially mentioned. The last is a Renaissance work of the last years of the sixteenth century, the others belong to the Romanesque period, and are important for the study of French art at that time.

Laon Cathedral.—In the *R. Art Chrét.* 1901, pp. 36-50, E. Lambin gives a general account of the Cathedral of Laon. The merit of this article lies chiefly in the careful study made of the sculptured flora of the capitals.

The Church of Saint-Leu-d'Esserent.—The church of Saint-Leu-d'Esserent, noted by Ernest Renan in the *Rev. d. Deux Mondes*, July, 1862, as a remarkable example of architectural unity, is the subject of an article by E. Lambin in the *Gaz. B.-A.* 1901, pp. 305-317. The details of the architecture, as well as the flora of the capitals, are carefully described.

Episcopal Chapel at Meaux.—Amongst the many organizations for the study of local history and archaeology in France may be mentioned

that at Meaux. From the local Bulletin are taken the plans and details of the twelfth century Episcopal chapel, published by Canon Jouy and reproduced in the *R. Art Chrét.* 1900, pp. 540-543.

BELGIUM

The Church at Messines. — The church at Messines is described and illustrated by B. Bethune in *R. Art Chrét.* 1901, pp. 193-211. Founded by Adèle of France about 1060, the church retains parts of the original eleventh century structure. Other parts date from the thirteenth, fifteenth, and sixteenth centuries. This church is one of very few in Flanders, the central tower of which is crowned with a cupola.

GERMANY

The Treasure of the Abbey of Reichenau. — In *R. Arch.* XXXVIII, 1901, pp. 177-197 (4 pls.; 7 figs.), Jean J. Marquet de Vasselot writes of the treasure of the Abbey of Reichenau in Lake Constance. An ivory pyxis, not earlier than the eighth century, the reliquary of St. Mark, a fine example of French work of the fourteenth century in gilded silver, and the reliquary of Sts. John and Paul, also French work of the first half of the fourteenth century, are especially discussed. Other interesting works are a stamped book cover of silver with repoussé medallions of gilded silver, of the fifteenth century, the reliquary of St. Fortunata, German work of the fifteenth century, the reliquary of Sts. Felix and Regula, also of the fifteenth century, a bronze cast of a Romanesque bronze vessel for holy water, a plaque of green glass, a reliquary in the form of a bust, and several crosses and other objects of mediaeval date. Objects of the seventeenth and eighteenth centuries are also numerous.

The Treasures of the Church of S. Matthias at Trier. — In the *R. Art Chrét.* 1901, pp. 179-192, X. Barbier de Montault describes under eleven titles the treasures of the church of St. Matthias at Trier. The oldest of these treasures is the girdle of St. Oswald (seventh century); the most important is the thirteenth century reliquary of the Holy Cross.

GREAT BRITAIN

An Ivory Book-cover in the South Kensington Museum. — Under the title 'Die Madonna zwischen Zacharias und Johannes,' H. Graeven discusses in the *Byz. Z.* 1901, pp. 1-22, an ivory book-cover in the South Kensington Museum. (Cf. Maskell, *Ancient and Mediaeval Ivories in the South Kensington Museum*, p. 53, No. 138, 66.) He concludes that it was executed under the Abbot Salmann (972-998) at Lorsch, was copied from a Byzantine ivory of the sixth century, and that an ivory book-cover in the Vatican (Garrucci, V, Tav. 457) adorned the opposite cover of an Evangelium catalogued in the eleventh century as in the library at Lorsch.

A Byzantine Silver Treasure. — In *Archaeologia*, LVII, i, 1900, pp. 159-174 (3 pls.; 17 figs.), Ormonde M. Dalton describes a Byzantine silver treasure from the district of Kerynia, in Crete, now in the British Museum. There are three larger objects and a number of spoons. Originally the spoons numbered about thirty-six, but eleven or twelve of these are now missing. The larger objects are a flat dish, or paten, a basin, and a hexagonal vessel for suspension, perhaps a lamp, or censer. The basin has a

double border round the rim and a medallion in the centre; round the medallion is a border in niello; in the medallion is the bust of a saint, probably St. Sergius. On the under side of the flat dish, or paten, are four stamps, with monograms, busts, and designs, probably to identify the owner or donor. The dish has a moulded rim of fine workmanship, and in the centre a niello cross. The censer is adorned with six busts in two groups; the bust of Christ is between those of Sts. Peter and Paul, that of the Virgin between those of (probably) Sts. James and John the Evangelist. On the bottom are four stamps. The spoons have engraved palm leaves on the back of the bowls; eight have no further ornament; one has the inscription ΘΕΟΔΩΡΟΥ; four have the inscription ΑΥ + ΑΛ; the remaining eleven have running animals in relief in the inside of the bowl. Comparison with other works of industrial art make it probable that the greater part, at least, of this treasure should be ascribed to the second half of the sixth, or beginning of the seventh, century.

A Pre-Norman Cross at Nunburnholme, Yorkshire.—In *Reliq.* 1901, pp. 98-106 (4 figs.), J. Romilly Allen publishes a cross-shaft at Nunburnholme. The shaft, broken and incomplete, is adorned on its four sides with figures and patterns in relief, of a decidedly Scandinavian character. The only obviously scriptural subject is the 'Virgin and Child.' A centaur is of course derived from classical prototypes, but is not unusual on Scandinavian monuments. As a possible date of this cross-shaft, the time about 627, when Coifi destroyed the idols at Goodmanham, is suggested.

Lacock Abbey, Wiltshire.—In *Archaeologia*, LVII, i, 1900, pp. 125-158 (5 pls.; 4 figs.), Harold Brakspear gives a brief sketch of the history of Lacock Abbey from its foundation in 1232, followed by a careful description of the remaining parts and examination of the evidence regarding the parts destroyed. In 1540 the abbey was converted into a manor-house, and at that time some parts of it were destroyed, but the rest is admirably preserved. The cloister and chapter-house are especially fine. Of the church only so much remains as was needed to form a wall of the manor-house.

Some Interesting Essex Brasses.—In *Reliq.* 1901, pp. 73-88 (12 figs.), Miller Christy and W. W. Porteous publish and discuss brasses in Essex. The earliest published dates from about 1320, the latest from 1639.

An Illuminated Manuscript of the Fifteenth Century.—In *Archaeologia*, LVII, i, 1900, pp. 29-70 (5 pls.), Harold Arthur, Viscount Dillon, discusses a manuscript collection of ordinances of chivalry of the fifteenth century belonging to Lord Hastings. The subject-matter of the manuscript is interesting, and its illuminations are remarkably fine. Those published represent English shipping in the fifteenth century, jousting at the tilt, a mounted combat between John Astley and Pierre de Masse, 1438, a fight with axes between John Astley and Philip Boyle, January, 1441-42, arming a man for a fight on foot, and the arms and crest of Sir John Astley, K.G.

RENAISSANCE ART

ITALY

The Ducal Palace at Venice.—In the *Am. Architect*, 1901, pp. 21-23, C. Buckingham writes on the 'Traceries of the Great Painted Windows of the Ducal Palace,' at Venice. Only four windows still retain

their original tracery, the rest having been destroyed in the fire of 1577. The article emphasizes the original polychromatic character of the Ducal Palace.

Beato Angelico and Benozzo Gozzoli.—In *L'Arte*, 1901, pp. 1-29, A. Venturi writes concerning Beato Angelico and Benozzo Gozzoli. After giving their distinguishing characteristics, he reaches some striking conclusions concerning the coöperation of Benozzo with Angelico in the Cappella Nuova at Orvieto, and also in the frescoes of the Chapel of Nicholas V in the Vatican. The hand of Benozzo as well as that of Angelico must henceforth be looked for in these frescoes.

Francesco Bianchi-Ferrari.—In the *Gaz. B.-A.* 1901, pp. 376-384, Herbert F. Cook discusses the Madonna with Sts. Benedict and Quentin, now in the Galerie des Septs Mètres of the Louvre. In 1725 the painting was in the church of St. Quentin, Parma, and was then attributed to Francia. It was afterwards attributed to Lanfranco and to Badalocchio. When it reached Paris it was ascribed, in 1814, to Francesco Bianchi-Ferrari. The basis for this attribution is now unknown. Mr. Cook justifies this attribution and assigns other paintings to this artist.

Roberto Oderisi and the Incoronata Frescoes.—In the *Rep. f. K.* 1900, p. 345, Paul Schubring attributes the celebrated Incoronata frescoes in Naples, with some hesitation, to Paolo di Maestro Neri. In the same periodical, pp. 448-450, B. Berenson ascribes the frescoes to Roberto Oderisi, an attribution which Dr. Schubring is (p. 450) unwilling to admit.

The So-called Portrait of Maddalena Doni.—The portrait by Raphael in the Pitti, known as that of Maddalena Doni, cannot be a portrait of that lady, since the records of births in Florence show that she was born in February, 1489, and the burial records that she was "about fifty" years of age in December, 1540. During Raphael's Florentine period (1505-1508) Maddalena Doni was from sixteen to nineteen years old, whereas the lady in the portrait is some ten years older. (R. DAVIDSOHN in *Rep. f. K.* 1901, pp. 451-452.)

Raphael Tapestries.—Under the title 'Les Actes des Apôtres, Tapisseries d'après Raphael,' in the *R. Art Chrét.* 1900, pp. 91-123, Gerspach gives an excellent account of the tapestries made for the Sixtine Chapel after cartoons by Raphael. He concludes that from a decorative as well as technical point of view these tapestries have been overestimated; that better tapestries were made at the same period.

Tintoretto.—In the volume on Tintoretto in the *Künstlermonographien* published by Velhagen und Klasing, Henry Thode gave a general outline of the life and works of Tintoretto. In a series of articles in the *Rep. f. K.*, of which two are already published (1900, pp. 427-442, 1901, pp. 7-35), he enters more into detail. The chronological material which Thode has gathered and the list of paintings which he is publishing should greatly facilitate the comprehension of the most productive of Venetian masters.

FRANCE

Sculpture at Troyes.—In 1900, R. Koechlin and Jean J. Marquet de Vasselot published a volume entitled *La Sculpture à Troyes et dans la champagne méridionale au XVI^e siècle* (Paris, Colin), making a thorough use of documentary and monumental evidence. In an appreciative review in the

Gaz. B.-A. 1901, pp. 260-264, Paul Vitry characterizes this book as an important contribution to the study of French sculpture and an excellent example of the proper method of study in the history of art.

NETHERLANDS

Hubert van Eyck.—In the *Gaz. B.-A.* 1901, pp. 474-482, W. H. James Weale writes on Hubert Van Eyck. By a consideration of the costumes, architecture, botany, and other details represented in the pictures he assigns to Hubert the following paintings usually attributed to Jan Van Eyck: (1) The St. Francis in the Metropolitan Museum, New York, and the replica or copy in the museum of Turin. (2) The three Maries at the Sepulchre, Cook collection, Richmond. (3) Calvary, Berlin Museum. (4) The Madonna and Saints, Gustave de Rothschild Collection, Paris, and the replica of this painting in the Berlin Museum. (5) The Donor protected by St. Anthony, Museum of Copenhagen.

Jan Van Eyck in France.—It is customary to assume that the artistic activity of Jan Van Eyck lay between 1432, the date of the altarpiece of the Mystic Lamb, and 1440, the date of his death. In the *Gaz. B.-A.* for 1901, pp. 215-229, Karl Voll argues against the probability of this assumption and points out as early works of Jan the Annunciation at St. Petersburg, the Madonna of Chancellor Rolin in the Louvre, the Madonna with the Carthusian monk in the possession of Baron Gustave Rothschild in Paris, and the Burleigh house Madonna in Berlin.

A Painting wrongly attributed to Roger van der Weyden.—In the museum of The Hague is a fine Deposition from the Cross attributed on the authority of Dr. Waagen to Roger van der Weyden. A. J. Wauters, however, assigns it to Memling. Kaemmerer rejects both attributions and assigns it to an unknown master whose style resembled that of Memling and also that of Roger van der Weyden. W. H. James Weale agrees with Kaemmerer. (*R. Art Chré.* 1900, pp. 124-125.)

Josse of Ghent and the Ideal Portraits from Urbino.—It is known from Vespasiano da Biotici (I, p. 295) that Duke Federigo of Urbino employed a Flemish painter, skilled in oil painting, who executed for him a series of ideal portraits of philosophers, poets, doctors of the church, etc. Baldi, the biographer of the Duke, gives us the name of this painter as Josse van Ghent. In the *Rep. f. K.* 1901, pp. 54-59, Karl Voll enumerates 28 such portraits painted in 1476, some of which are now in Rome and others in Paris.

Joachim Patenier.—In the *R. Art Chré.* 1900, pp. 463-471, Jules Helbig writes a general notice of the work of Patenier. The article is an extract from a forthcoming book entitled *Les peintres des Bords de la Meuse*. Patenier was the pupil and associate of Gérard David and was praised by Albert Dürer as an excellent landscape painter.

GERMANY

Dürer's Adam and Eve of 1504.—In the *Rep. f. K.* 1901, pp. 453-454, Hans Brenner calls attention to the painting of Adam and Eve by Palma Vecchio, formerly ascribed to Giorgione, now in the gallery at Braunschweig. It is not easy to determine, however, whether Dürer was influenced directly or indirectly by Palma Vecchio, or whether Palma was influenced by Dürer's

engraving, or whether both derived the same composition from a common source.

Adam Elzheimer.—The position of Adam Elzheimer, a precursor of Rembrandt as a painter-engraver, has long been known, although the list of etchings ascribed to him by Nagler, *Monogrammistes*, I, 236, does not contain a signed example. In the *Gaz. B.-A.* 1901, pp. 401-412, S. Sheikévitch publishes an etching from his own collection which is signed *A. Elzheimer f.* A modified copy of this by Jan Van de Velde, entitled 'Ignis,' is in the Bibliothèque Nationale. The engraving known as a 'Sorceress,' by Jan Van de Velde, appears also to be a copy of a similar composition by Elzheimer.

Peter Vischer.—In the *Rep. f. K.* 1901, pp. 36-53, Ludwig Justi gives the results of a critical study of Peter Vischer's works. After establishing a chronological series of his works, Justi considers the question as to how far Vischer was aided by his sons and by other artists and how much is to be attributed to Italian influence.

An Old German Painting at Milan.—In the Museo Poldo-Pezzoli is an important German painting until recently attributed to Quentin Matsys. It consists of five panels in a Gothic frame. The central panel represents the 'Annunciation,' the other panels contain pictures of saints in pairs. In *L'Arte*, 1900, pp. 30-34, Emil Jacobsen attributes this altarpiece to the painter from Cologne, who painted the 'Glorification of the Virgin,' now in the Walraf-Richartz Museum at Cologne. To the same master is attributed an 'Adoration' in the Berlin Gallery.

GREAT BRITAIN

A Triangular Lodge at Rushton.—In the *Am. Architect*, 1901, pp. 67-68, L. Viajero, under the title 'An Architectural Curio,' describes a strange triangular building erected at Rushton in 1595 by Sir Thomas Tresham. The building in its plan, elevation, and decorative details emphasizes the number three. It is supposed that Sir Thomas erected the building to commemorate his mental struggles on the subject of the Trinity.